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A MONTHLY JOURNAL DEVOTED TO THE ELEVATOR AND GRAIN INTERESTS.

PUBLISHED BY
MITCHELL BROS. COMPANY,
(INCORPORATED.)

VOL. VI.

CHICAGO, ILLINOIS, OCTOBER 15, 1887.

No. 4.

SUBSCRIPTION PRICE,
ONE DOLLAR PER ANNUM.

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Is embraced the LARGEST LINE and GREATEST VARIETY of ELEVATOR and WAREHOUSE SEPARATORS in the world. They are built for every capacity, for every purpose, and for handling every kind of grain. They are PERFECT in construction, and PERFECT in operation. They are used in and indorsed by the largest elevators in the world, and also by the smallest elevators in the world. We will be glad to furnish full particulars and prices, and kindly bear in mind that an order for our smallest machine is as carefully filled as an order for a carload of our largest.

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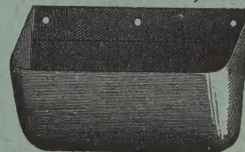
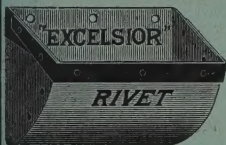
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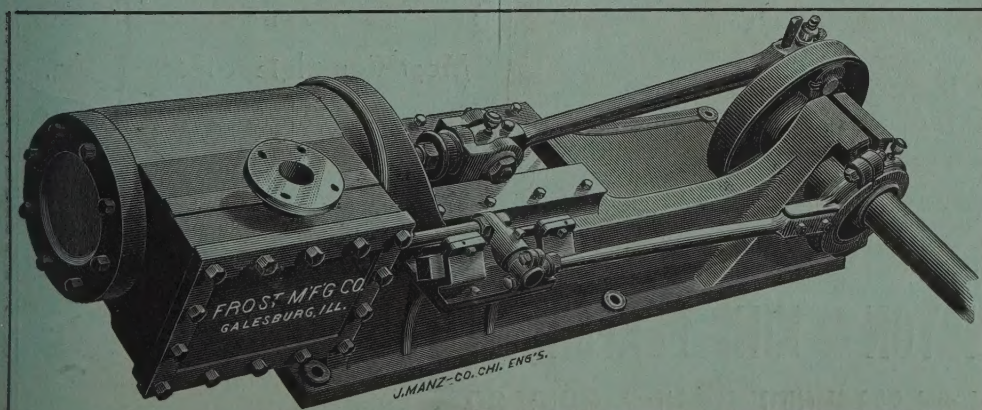
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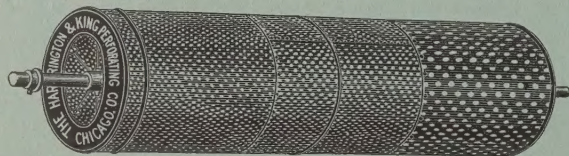
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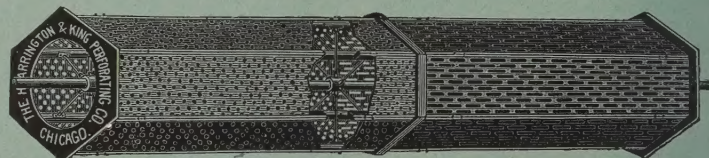
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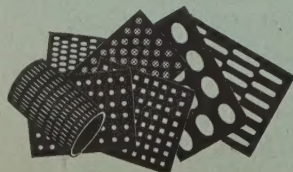
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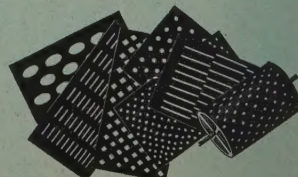
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THE SIOUX CITY CORN PALACE.

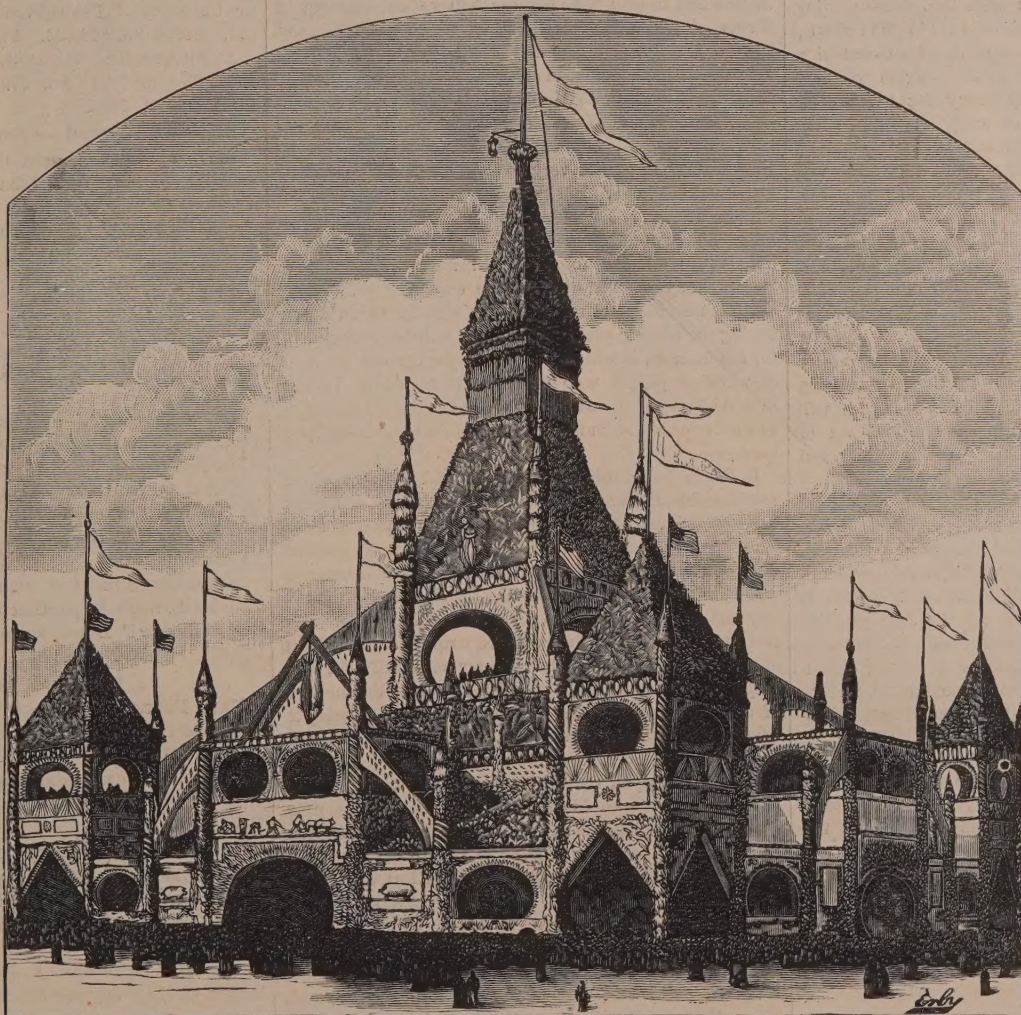
The formal opening of the Sioux City, Iowa, Corn Palace Jubilee took place Oct. 3, and it was attended by an enormous crowd of people. The Corn Palace, of course, is the great feature of the festival, and it certainly is a very unique conception. The building is 240x100 feet. The walls rise to a height of forty-five feet, and thence the roof is raised to the cupola and spire, which is 100 feet high. The roof is thatched with corn stalks, in which are interspersed many other fruits of the fields. The walls rise one harmonious, though variegated, mass of the stalk and leaf at the base, wicker work, green as the rushes of the Nile, and here and there, pendant in rich contrast, are the golden ears. The double arches of the openings in the pavilions are faced with rows of ears, sometimes richly fringed with the husk, sometimes of one color and sometimes of another; now in one form and again in another. Then, the great panels in the body of the wall, and the columns rising high to the battlement—here is one of the special marvels of the unique creation, or rather scores of marvels. In each of a score of these panels or divisions there is wrought some design, here a diamond and there a checker, here a motto and there some other inscription wrought from corn of a dozen kinds and a dozen hues—golden, yellow, pure white, blood red, violet, and so on. Against these ingenious forms of beauty stands the quiet but none the less effective beauty of the corn-clad columns, broken by the columns, around which are bound the russet blades of the corn plant and a graceful combination of grains and

grasses. Along the upper line of the front runs a shiny hem of oats, interspersed by the dark seed of the sorghum plant, corn ears of flaming red or some other relieving color. Still above rise the graceful minarets, raimented

rounded and interwoven with the plant itself and other products in every conceivable shape.

The interior decorations are of a more elaborate character. In the whole vast space there is not a hand's breadth left uncovered. For two weeks, more than a hundred ladies, assisted by a large corps of workmen, have been ceaselessly at work upon the decorations, using for material corn, grain, grasses, flowers and autumn leaves. With these materials the walls, posts and rafters have been decked out in a most attractive style. There hangs a sunflower, perfect in form and color, yet every fiber from the corn plant. Yonder are tiger lilies, of the same elements, illusion perfect—who would have believed it? Everywhere bouquets, panels, ceilings, mottoes, draperies, pendants, stars, statues of Ceres, bells, lattice work, beaded curtains, all forms of farmers' implements—every last one made of corn or of the plants that grow with it. As you enter the wide portal, above will be the seal official of the city—every bar and coloring made of corn. Beyond, a great spider and his web will be spread out above. Still higher hangs a mammoth bell. To the left there is a tableau of "The Golden Stair." Further on the figures of an Indian and an eagle—all made and dressed with the blade and grain and stalk of corn.

It is stated that 35,000 bushels of corn were used in the decoration of the palace and city. In the decoration of the palace alone 25,000 bushels of corn were used, of which 15,000 bushels were yellow, and the rest other colors. The construction of the building required 300,000 feet of lumber, and in construction and decoration 3,500 yards of rope, 2,500 yards of fence wires



THE CORN PALACE AT SIOUX CITY, IOWA.

in rich colors of native grasses, and crowned with tufts of millet, and flying banners. In the background rises the roof, a seeming solid mass of corn almost, and from it towers the cupola, its arches wrought like those below, and here and there panels of curious forms of corn—red, white, violet, yellow, and all colors under the sun—sur-

and one and a half tons of nails were used. It took forty-two men a week to erect the building, and the work of decorating took three weeks more. The total cost was \$28,000, of which sum \$10,000 was raised by private subscription, and the balance guaranteed by a number of gentlemen. The architect of the palace was E. W. Loft, and D. T. Hedges is credited with first having suggested the scheme.

The festivities continued for two weeks, and thousands of people visited the city to witness the novel tribute to King Corn. A different programme was arranged for each day of the festival, and everything was done on a grand scale. The people seemed to have gone corn mad. Men flourished cornstalk canes, wore popcorn cravat pins and watch guards; women had corn-husk bonnets, corn necklaces, bracelets and girdles. The streets, stores, banks and hotels were festooned with corn. When it is remembered that the idea of the corn palace is only a few weeks old, then it can be realized what a marvel it really is, and Sioux City is certainly to be congratulated on her happy thought in conceiving it.

TRADE AT PHILADELPHIA.

PHILADELPHIA, Oct. 10, 1887.

There is an easier feeling in financial circles, and the demand for capital is less pressing. In trade there is no essential change to report, the movement being fairly active in this and other seaboard cities, while from the interior reports from all directions are of an encouraging character. Merchandise of all descriptions is moving freely into the channels of consumption; dealers are laying in their autumn and winter supplies, with the consciousness that the generally prosperous condition of the country will afford a ready outlet for their stocks; the uneasy feeling respecting money is gradually giving place to a display of confidence; railroad earnings and bank clearances continue to make a favorable exhibit as the season progresses, showing important gains compared with previous weeks, as well as with the corresponding period last year; the industrial situation is in good shape, and labor disturbances are in no case of a threatening character. The crop movement is increasing in volume, and of cotton has been unusually heavy for this season of the year. These conditions are more than sufficient to neutralize the few unfavorable features that are to be found, and foreshadow continued activity until the close of inland navigation restricts transportation facilities. Where there is hesitation it is due rather to the spirit of conservatism that prevails in the Quaker City, and a desire to await further developments, than because there is any fear of impending danger. It is well that the little panic of two weeks ago came along as it did. It has served a double purpose, and all in the line of business safety. In the first place, it was a timely and impressive admonition against the tendency to reckless speculation that often comes with prosperous business, and it will save many from a voyage on the ever-perilous sea of gambling for wealth. In the second place, it has proved conclusively that there is no ground whatever for any business disturbances. The fact that when speculative circles were panicky, and business channels temporarily cramped, the legitimate business of the country went on entirely unaffected by the flurry, is indisputable evidence of the absolute soundness of all branches of legitimate enterprise. Business generally is on the best possible business basis; the people are more generally solvent than at any time since the war, and however gambling speculations may wax or wane, industry, commerce, finance and trade will move along without fear of serious disturbance.

There has been a larger movement of wheat from the spring-wheat sections within the last ten days, but the receipts of winter wheat continue very moderate. Comparatively free selling in the Chicago market against the larger shipments from the Northwest has slightly depressed values at that point, while here there has been an advance of about $\frac{3}{4}$ of a cent per bushel, encouraged by a little better export inquiry and stronger reports from foreign markets. The general situation is not much different from what it was a month ago. Stocks in London and Liverpool are smaller than they were at this time last year, but are apparently ample for near consumptive requirements, as there is little animation in the export trade. The cable advices, however, show increasing strength in foreign markets, although they are not accompanied by urgent buying orders. Any material advance in domestic prices has been prevented by this indifference of shippers and the absence of "outside" orders in the speculative market. High grades are very scarce here, and wanted

by millers. Corn prices have ruled strong, and in this and other Eastern markets have advanced $1\frac{1}{4}$ cents per bushel, under the stimulus of larger exports and a good demand for consumption throughout the Middle and New England states. Nothing doing here on speculative account. The oats market has ruled strong and higher under light receipts and a good local trade demand. Philadelphia receivers and shippers of wheat are complaining of the diversion of the export trade to Western houses, who by the assistance of the railroad companies are able to place wheat in Liverpool and in other foreign ports as cheaply as the Eastern receiver can lay it down in Philadelphia. This is done on through bills of lading, which include the cost of ocean transportation, and are made at the same rate as the schedule charges for hauling the grain from the West to the seaboard. In the practice of this form of discrimination the carrying companies escape the penalties of the Inter-State Commerce Law by billing the grain on the basis of schedule rates to the seaboard, and leaving the cost of ocean transit to be paid in some way unknown to the grain trade. Perhaps the steamship companies generously donate their berth room to this purpose.

There has been some surprise shown at the fact that with a wheat crop probably 30,000,000 bushels below that of last year and a fair export demand, the price of wheat should remain so low. It happens sometimes that when the wheat crop is a short one in the United States it is unusually large elsewhere. This is one of the years in which such a thing has happened. The European wheat crop is now known to be unusually large. The statistics of the international corn market of Vienna, which have gained a well-deserved reputation for accuracy, show the crop of 1887 to be far above the average. The Austrian yield is placed at 17 per cent. above an average, and that of Hungary at 26 per cent. above. Instead of buying wheat, as is frequently the case, Austro-Hungary will have 30,000,000 bushels to export. The crop in Great Britain and Ireland is 20 per cent. above an average; in Servia, 40; Central Russia, 18; Wallachia, 25, and France, 5. The yield in other European countries is up to or above the average, making it certain that the demand for American and Indian wheat will not be so great as in former years. If this estimate should be found too high, however, the American surplus for export will be large enough to meet a very heavy demand. With the surplus carried over from 1886, the available wheat in the United States will not fall much short of 500,000,000 bushels, an amount that will meet the most liberal demands for home consumption and leave a large surplus to be exported or carried over, as the case may be. Under the circumstances, wheat is pretty certain to rule low during the coming year. While this will be unfortunate for the farmers, it will prove the reverse for the millions of working people who must buy their bread. It is an ill wind that blows nobody good, and what promises to be the farmers' loss in this case is certain to be other people's gain.

In the last eight months the export and import trade of Philadelphia amounted to \$51,829,709, against a foreign trade of \$48,936,150 in the corresponding period of 1886. The repeal of the taxes on the raw materials of production, and the removal of other tariff restraints upon commerce, would vastly stimulate the foreign trade of this city and increase the prosperity of the inhabitants. The raw materials brought in would be wrought into articles of utility and luxury by the industry and skill of Philadelphia working men, and would be sent into the markets of the world to increase the profits of her merchants. There would thus be increased employment for labor at more remunerative wages, and this would have a vivifying influence upon the whole industrial system. Yet, while this reform would so obviously promote the prosperity of Philadelphia, her working men, manufacturers and merchants persist in sending to Congress representatives who stubbornly vote against every effort to remove tariff abuses and inequities. It has been a long while since so many "tramps" were anchored in the river as there are at present. Your readers will, of course, understand that a tramp, so-called, is a steam vessel that plies between any ports in navigable waters of the world. They all fly the British flag. Many of the "tramps" are loaded, while others are "light" waiting for a cargo. Notwithstanding this, the supply of steamers is light, and freight rates for grain are firmly held at 3s. Demand, however, is very moderate. For berth room in regular line steamers there has been a better inquiry, resulting in an advance to $2\frac{1}{4}$ d. for Liverpool, and to $2\frac{1}{4}$ d. for Glasgow.

J. C. D.



Issued on Sept. 13, 1887.

CORN SHELLER.—Benjamin B. Price, Arlington, Texas. (No model.) No. 370,022. Serial No. 231,178. Filed March 16, 1887.

AUTOMATIC GRAIN SCALE.—Harry L. Earle, Minneapolis, Minn. (No model.) No. 369,698. Serial No. 223,138. Filed Jan. 3, 1887.

Issued on Sept. 20, 1887.

BALING PRESS.—Andrew Wickey, Quincy, Ill. (No model.) No. 370,170. Serial No. 216,555. Filed Oct. 18, 1886.

BALE WEIGHING ATTACHMENT FOR BALING PRESSES.—Andrew Wickey, Quincy, Ill. (No model.) No. 370,171. Serial No. 220,668. Filed Dec. 4, 1886.

BELT-SHIFTER.—George W. Miller, Woonsocket, R. I. (No model.) No. 370,153. Serial No. 222,204. Filed Dec. 21, 1886.

CALCULATOR FOR GRAIN, ETC.—Alexander Sargeant, Jr., Udall, Kansas, assignor of one-half to Geo. D. Akers, same place. (No model.) No. 370,284. Serial No. 228,225. Filed Feb. 19, 1887.

GRINDING MILL.—Nelson P. Bowsher, South Bend, Ind. (No model.) No. 370,310. Serial No. 223,017. Filed Dec. 30, 1886.

ROOF.—Edmond Horbaczewski, Vienna, Austria Hungary. (No model.) No. 370,259. Serial No. 223,714. Filed April 5, 1887.

METALLIC ROOFING PLATE OR SHINGLE.—Lewis D. Cortright, Hyde Park, Ill., and Stephen P. Darlington, West Chester, Pa., assignors to the Cortright Metal Roofing Company of Pennsylvania. (No model.) No. 370,317. Serial No. 242,933. Filed June 30, 1887.

AUTOMATIC GRAIN SCALES.—Sharon Case, Montezuma, Ind. (No model.) No. 370,316. Serial No. 208,596. Filed July 21, 1886.

Issued on Sept. 27, 1886.

BALING PRESS.—James G. Buchanan, Neoga, Ill., assignor of two-thirds to John W. Peters and Franklin D. Voris, both of same place. (No model.) No. 370,374. Serial No. 211,212. Filed Aug. 18, 1886.

BALING PRESS.—John A. Hampton, Rosedale, Kan. (No model.) No. 370,475. Serial No. 209,856. Filed Aug. 3, 1886.

BALING PRESS.—Samuel J. Webb, Minden, assignor of one-half to Reuben N. McKellar, Shreveport, La. (No model.) No. 370,509. Serial No. 234,423. Filed April 11, 1887.

GRAIN CAR DOOR.—William T. Spillane, Casselton Dak. (No model.) No. 370,566. Serial No. 219,692. Filed Nov. 23, 1886.

METALLIC SHINGLE.—Frank E. Sagendorph Chicago, Ill., assignor of one-half to E. Starr Lloyd, same place. (No model.) No. 370,417. Serial No. 244,056. Filed July 12, 1887.

METALLIC SHEETING FOR SIDING AND ROOFING.—Longley L. Sagendorph, Cincinnati, Ohio, assignor of one-half to Harlan P. Lloyd, same place. (No model.) No. 370,659. Serial No. 223,857. Filed Jan. 10, 1887.

Issued on Oct. 4, 1887.

BELT FASTENER.—Francis E. Jenkins, Frankville, Ga. (No model.) No. 370,873. Serial No. 230,512. Filed March 11, 1887.

GRAIN WEIGHING MACHINE.—John B. Oyer, Gridley, Ill. (No model.) No. 371,148. Serial No. 235,207. Filed April 18, 1887.

The Colusa, Cal., *Herald* says that the harvest on the Glenn ranch is over. The yield in round numbers is 200,000 sacks of grain. Seventy-five thousand sacks have been shipped for storage at Port Costa; 25,000 sold; 30,000 stored in home warehouses, etc. This is probably the largest yield for any one ranch in the state this year.

The Hon. Miles C. Moore, a well-known capitalist of Walla Walla, says that Eastern Oregon will this year have the largest wheat yield ever known, and adds: "The largest yield that I ever knew of personally was seventy-one bushels per acre for a field of thirty-two acres. The grower made affidavit before me as to these figures after the grain had been threshed and the fields measured by competent surveyors."

SPLENDID WORK DONE BY RUBBER BELTS.

The high standard of efficiency which can be realized by the employment of strictly first-class rubber belts is now receiving merited recognition from users who have had them in severe service for many years, and whose experience cannot fail to be of value to all mill-owners and furnishers of factory equipments. In the matter of simple tensile strength, the superiority of these belts has long been conceded. In ordinary work, however, the consideration is practically of far less importance than that of having a belt which will hug the pulley tightly, or with which there will be no "slip." In this particular, whether the pulleys used be of the ordinary iron pattern or whether they be covered with leather, rubber, paper or other material, the rubber belt has incontestably the advantage, as it will never slip under any service to which a belt of nearly suitable size for the power required can be subjected, whether the pulleys be covered or not. The slipping of belts is one of the most troublesome incidents in many shops, and it is not infrequent to find mechanics rubbing them with beeswax, resin and other substances to prevent slipping. This should never be done with any kind of belt; but where a rubber belt is used, the slipping, which affords a temptation to resort to such expedients, does not occur.

In the accompanying illustration we show two large belts of this kind recently completed by the New York Belting and Packing Company, each of them nearly half a mile long. These belts were sent to West Superior, Wis., and each of them weighed 11,000 pounds. Had they been made of leather, they would have required at least 500 selected hides to manufacture each one of them. At the same time the company also furnished a driving belt 52 inches wide, eight-ply, 298 feet long and weighing 4,000 pounds.

In the larger picture may be seen a belt 2,700 feet long, recently made for the Pennsylvania Railroad Company, and in use in one of their grain elevators in Jersey City. This belt is used to convey grain from one end of the immense building to another, the grain being delivered upon the belt from another belt, and being taken off by a simple form of guide arm at any portion of its length, as well as at the end, and conducted into chutes for delivery to vessels at the dock. The belt runs on small rollers, and there is a simple form of tightener at the ends, by which it can be readily kept straight and even. In making conveyor belts of this description the company has long held a leading place, the superiority of such belts in point of economy, as well as of efficiency, being equally pronounced.

Perhaps the most important consideration of all to be taken into account in fitting up machinery is to have the plant so provided with power that there shall be no "breakdowns." Such mishaps necessitate the waiting of workmen in time they are paid for, as well as delay of the work, and involve an increased expense in the cost of

production, which is seldom estimated at its true importance. In fact, there is no room allowed at all for such an item of cost with the close figuring practiced in many of our large industries at the present day, although it occurs with more or less frequency in every business. As touching this point, the company last year received a highly

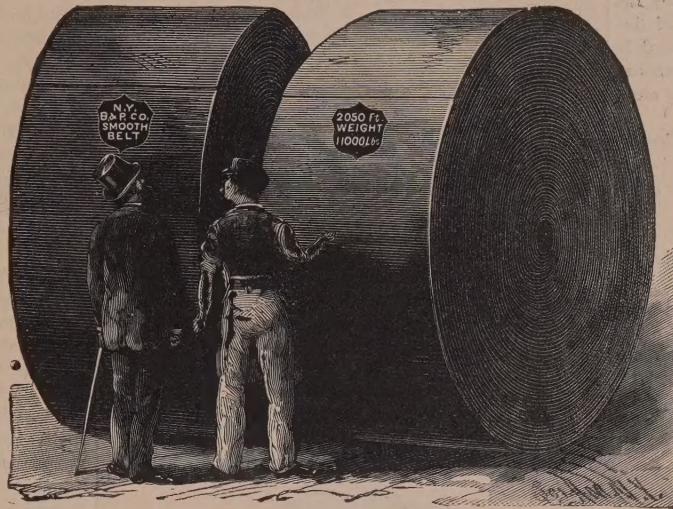
the rubber being driven through and through its meshes by powerful machinery. The fabric used for this purpose is made expressly for the company by Brinckerhoff, Turner & Co., of New York, and has more than double the strength of the heavy cotton duck used for sails of ships. The preparation of the rubber itself is, however, a long and very elaborate process, in which the present manner of working has only been reached after years of experiment. The sulphur to be used in the vulcanizing is carefully tested and weighed, as are also the different metallic oxides, making a semi-metallic compound, which gives the surface of the belts a high degree of firmness, while there is yet sufficient elasticity to allow of their hugging the pulley closely, and enables them to resist a high degree of heat, so that their surfaces may not be injured by friction. The several thicknesses of rubber-impregnated duck which go to make the several weights of belts are so arranged, by the folding over of the outside strip, as to present a perfectly even and half round edge, and then passed between powerful heated rollers. Subsequent to this the large belts are finished in an immense steam press, said to be the largest of the kind in the world, and calculated to completely take the "stretch" out of the largest-sized belt. The press will take a belt six feet wide and fifteen feet of its length, steam being let into its bed and platen

so that the temperature can be readily regulated, and the pressure and heat applied while the belt is under the full tension of the heaviest strain it may be desired to put upon it, thus setting its fibers as compactly as they are formed in a steel spring. The company owns the patent for this stretcher, in combination with the press, as well as many other patents of great value in the business.

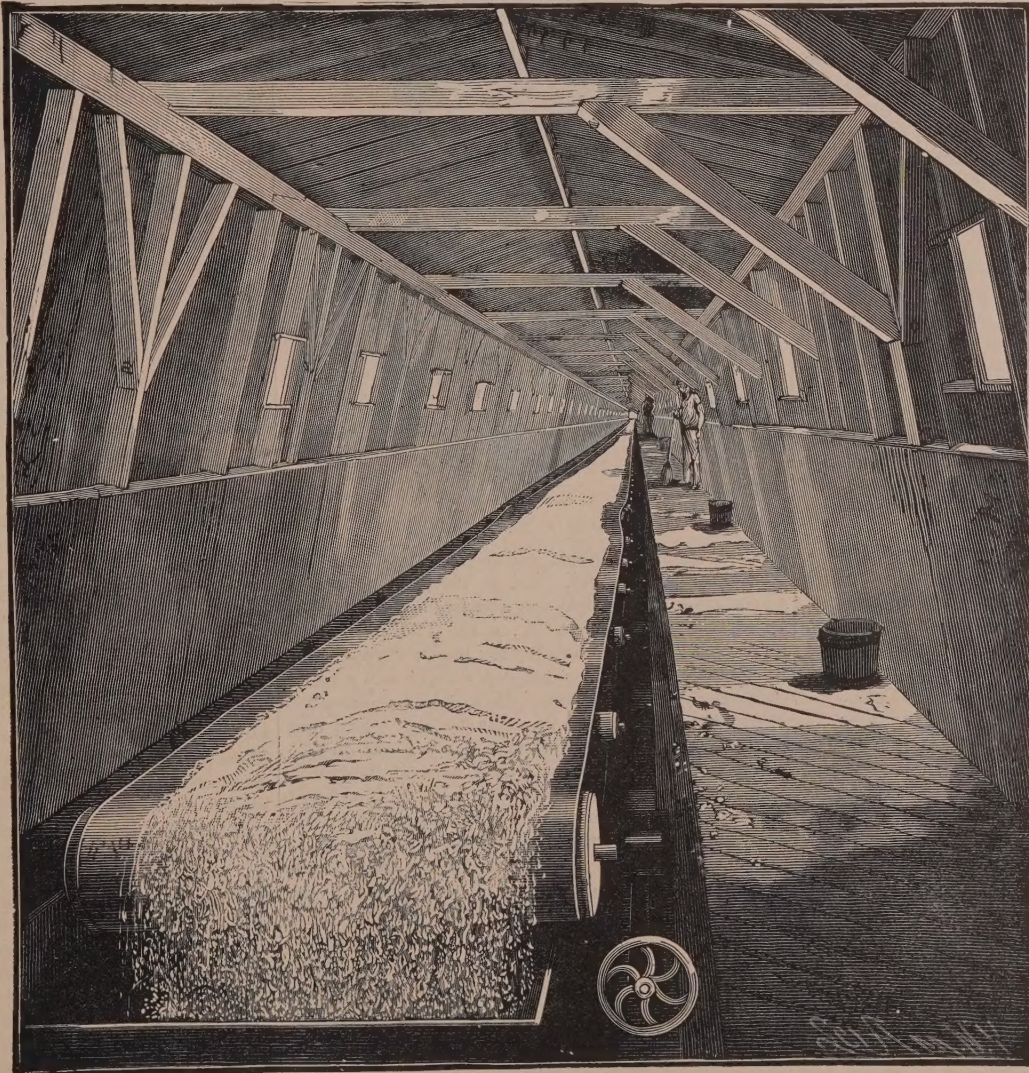
The principal factory of the company, and the oldest one engaged in the rubber business, is at Newtown, Conn., although they have another one at Passaic. The offices, salesroom and warehouse are at No. 15 Park Row, New York City. John H. Cheever is the treasurer of the company and general manager of the business.

Gen. H. H. Sargent, a former president of the Fargo Southern Railroad, grows one of the large wheat farms in the Red River Valley, and has spent most of the summer in and near Dakota. He has given the wheat crop this season his special attention, and pronounces the statement put forth by romantic writers that Dakota has grown 40,000,000 bushels of wheat this year an enormous exaggeration. He says that 25,000,000 bushels would be a large estimate, and he would hardly put it above 20,000,000.

James Williamson of Toronto, Ohio, captured a live crow in his cornfield. While carrying it home he was attacked by hundreds of other crows. He first tried to run away; then he made a vigorous attempt to defend himself with a club; next he sought shelter in a shed, where the besieging crows kept him a prisoner for more than an hour.



LARGE RUBBER BELTS.



A BIG GRAIN ELEVATOR BELT MADE BY THE NEW YORK BELTING AND PACKING COMPANY.

significant testimonial of the durability of one of their belts under heavy service. It was a main driving belt, 48 inches wide and 320 feet long, six-ply, used in Central Elevator "B," Chicago, and had been in constant service from September, 1869, until April, 1886, a period of sixteen years and seven months. The uninterrupted use for so long a period of so large and heavy a driving belt affords the best possible practical gauge of the character of its manufacture. The great tensile strength of rubber belting is due to its web of heavy cotton duck,

THE CHICAGO BOARD OF TRADE IN 1858.

Some days ago the secretary of the Chicago Board of Trade received the manuscript records of proceedings at several meetings of the Board during the year 1858, in the handwriting of W. W. Mitchell, who was then its secretary and treasurer. They were presented by his brother, Richard M., one of the old members of the organization. The value of these papers to the Board is much enhanced by the fact that all of its official records were destroyed in the great fire of 1871. Following are a few points noted in glancing over the papers:

"The many members of the Board who are divided in opinion to-day on the momentous question of commission charges will read with great interest the following copy of action at the meeting of Jan. 4:

"WHEREAS, The members of this Board have become satisfied, after a trial of three years, that the commission heretofore charged for selling grain is inadequate for the services rendered; and, whereas, uniformity of charges is a matter of vital importance to all concerned; therefore,

"Resolved, That hereafter the commission to be charged for selling grain and all other property shall be (not less than) $2\frac{1}{2}$ per cent.

"Resolved, That any member of this Board who shall, upon investigation, be found guilty of varying from said rate, either directly or indirectly, shall be expelled from all the privileges of the Board and his name stricken from the books."

The words "not less than," which are here put in parenthesis, are interlined in pencil, and the Board appears to have been in too much of a hurry to adjourn to modify the last resolution so as to make it agree with the first as amended. It is worthy of remark that the above-named rate would be one and three-quarter cents per bushel on wheat at the present price in this market, which is nearly twice the former rate of one cent, while the recent contention has been between the advocates of one-eighth and one-fifth of a cent. Yet a membership in the Board could then be bought for \$5, while the present selling price is nearly \$2,000. What a change! And there was then no mention of a suspension of sixty days for a first offense! The penalty was nothing less than expulsion. The record does not state that any one incurred the punishment by collecting less than \$1 in \$40 as payment for the service of selling the property. Possibly Mr. George M. How, who appears to have been the mover of the resolution, could tell "an if he would."

Oct. 29 the Board considered the question of free trade between the United States and Canada, the most important of the topics discussed being whether flour manufactured in Canada from wheat grown in the United States should be admitted to our ports duty free, whether or not shaved shingles ought to be admitted duty free, and if it were advisable to recommend the subsidizing of a line of vessels to ply between Quebec and Liverpool. It is pleasant to remember, what is not stated in the report of the meeting, that the last named proposition was aimed at certain attempts in New York to force the whole grain trade of the West through Buffalo, and make it pay what were deemed to be exorbitant tolls on the Erie Canal.

The meeting of Dec. 13 adopted certain rules for the inspection of grain by reference to the weight per measured bushel. These had been prepared by the late George Rumsey, whose brother, Julian S., was then president of the Board and subsequently mayor of the city. This action was all the more important, as it led to a signing of certain articles by the warehousemen of the city by which they pledged themselves to do all in their power to assist in carrying out the system of inspection and the standard of weights as adopted by the Board, to allow the inspectors or any committee appointed by the Board to visit the warehouses at any time for the purpose of seeing that grain was being put into or taken out of the bins designated for the named grades; that they would always deliver out grain of the grade called for by the receipts presented, and consider themselves responsible for any difference in values and pay for the same promptly; that they would not under any circumstances mix inspected grain with that which had not been inspected, and would not select grain from that which had been inspected, but put all together so that the shipper would have the advantage of the best mixed with that which was not so good; also that they would furnish reports to the Board stating quantities received and shipped out. This may fairly be regarded as the foundation of the system of public warehousing of grain in this city,

which has since passed under the control of the state. Singularly enough, the discussions that attended the passage of these measures bore largely upon the merits of "blowers and cleaners" as necessary adjuncts to the elevators, and those houses that were provided with such appendages seem to have enjoyed the cream of the business. For many years since that time the cleaning of grain at a public warehouse has been considered to hold out a temptation which renders it undesirable to encourage them, and the advisability of employing them has but recently been urged as a means of attracting wheat hither from the far Northwest.

Lastly, as a sign of the primitive character of those times, it may be noted that at a meeting held Dec. 9, in the same year, the Board adopted a series of resolutions for the public welcoming back to the city of the proprietor of a commercial college, who had given up the business here, but wished to resume after an unsuccessful effort elsewhere.

The records of the year show that among the new members admitted were B. P. Hutchinson, S. A. Kent and several other since well-known citizens.

HEMAN A. BARNARD, ESQ.

The subject of the present sketch is well known to the milling and grain-handling trades of both continents as



HEMAN A. BARNARD.

one of the most prolific and successful of inventors. Born in Hyde Park, Vt., Jan. 13, 1826, and by turns a farmer's boy, a millwright and a pattern maker, the year 1854 found him at Moline, Ill., in the John Deere Plow Co., where he put into use, in 1858, his first invention, a machine for bending plow handles, which is still used exclusively by all plow makers. He soon after entered the Hemenway, Wyckoff & Co. chair factory, which firm soon afterward became Wyckoff & Barnard, and in 1872 was incorporated under its present name of Barnard & Leas Mfg. Co. In this factory the John A. Woodward Smut Machine was manufactured. It was at first a crude affair, which owes its present popularity to the mechanical skill of Mr. Barnard. In this establishment full play was given to his inventive genius, and in the course of a few years he has invented the following valuable improvements in milling machinery: The dustless wheat separator, oat and weed extractor, the Victor Brush for polishing wheat, the Eureka Flour Packer, the Eureka Bran Packer, the rolling screen dustless corn cleaner, various improvements in roller mills, scalping and centrifugal bolting reels, horizontal brush scourer, and last, but by no means least, his new middlings purifier.

Mr. Barnard has a fine residence on the bluffs overlooking the cities of Moline, Rock Island and Davenport, and the government island on which is situated the great arsenal. He has been twice married, and has a family of six children. Mr. Barnard has served in several city and county offices, and is held in high esteem by his fellow citizens. He is sixty-one years of age, but looks much younger. He has spent a busy and useful life, and will always hold an honored place in the memory of the milling fraternity.

GRAIN STORAGE IN CHICAGO.

The necessity of looking out for material to occupy the grain storage room in this city is forcing itself on the attention of the warehousemen. They see little reason to hope that the natural course of trade will enable them to fill their bins for the winter unless speculation shall take hold of the grain markets and run prices up to a higher point than the recent rule. The country elevators in the Northwest are gaping to be filled, and offer facilities for carrying wheat through the winter months much more cheaply than it can be done in Chicago. The corn crop is a short one, and not likely to be moved freely except into cribs near the place where it is grown. Oats, however, are abundant, and they offer an opportunity that is being embraced by the warehousemen. Those parties are buying up the current offerings of oats for the avowed purpose of using them for storage, the market price being so low that it would seem impossible to suffer much loss by a further decline.

The business of storing grain that is owned by others has enormously increased within a few years past. It was found to be one of the most profitable in which capital could be employed, and, as a natural consequence, is now in a fair way of being overdone. Buffalo long since had to close some of her elevators for the express purpose of preventing a competition that might have reduced rates to a low point. In doing this her grain-handlers set an example that has been followed by the men who manufacture whisky and straw board, and not a few other articles which were produced more rapidly than needed for consumption. The capacity in this city, already larger than required, except under the pressure of such an excitement as was witnessed here last spring, is about to be increased by nearly a fifth, while hundreds of men in the country behind us are doing their best to prevent the grain from coming here at all. They want to store it themselves as long as it can be made to yield a profit on the operation, and then be allowed a hand in shipping it as directly as possible to the ultimate consumer. Hence an increase of capacity in the city is accompanied by a diminution of the pressure to use it, and it looks as if something would have to give way. The tendency of the situation was recognized a little more than a year ago by a voluntary reduction of the first charges in Chicago and Milwaukee, but it has not formed much of an attraction, and the number of those who discourage the shipment of grain which they held in store is about to be increased, the fear being that room once vacated may remain empty longer than is agreeable to its owners. It is probable, however, that this action is only a staving off of the evil day, and not deferring it very far. It is whispered that when the new elevators now in process of construction are completed they will offer to handle at reduced rates in order to obtain new business, and in that case the others will soon follow.

The rates charged for storage at present are high as compared with the selling value of the property stored. The amount for a year is 15 cents per bushel, without counting anything extra for the first handling. This is one-fifth of the selling value of wheat, three-eighths that of corn, and more than half the value of oats. The last-named, if placed in store and allowed to remain there for two years, would be worth less than nothing to the holder of the receipts, as the storage would amount to more than the grain could be sold for. And this reckoning takes no account of the cost of insurance or interest on the use of the money employed in holding the property. The load is all the greater now, as the prices of grain average very low as compared with those of a few years ago, and its magnitude has formed a subject of loud complaint by the trade. It now appears probable that the wished for relief will come from the force of circumstances, if not from a desire on the part of the warehousemen to lessen the burden. Perhaps the day will arrive when the railroad companies will see it to be their duty to handle grain at terminal points without extra cost, the same as they now do flour and many other articles of merchandise. But that reform must be accomplished in the face of such a large and powerful interest that at present the change would be little short of a revolution.—*Tribune*.

The price of carrying wheat from the West to Liverpool has declined in fifteen years in the ratio of from \$1 to 78 cents.

The distilleries of Peoria, Ill., use 20,216 bushels of corn per day, and the government taxes on the product are \$70,000 per day.

THE OMAHA BOARD OF TRADE'S NEW BUILDING.

Among the many notable public buildings which have sprung up in the new West in recent years, the new Omaha Board of Trade Building deserves especial mention. On March 5, 1877, a meeting composed of many of the business men of Omaha was held in the parlors of the Grand Central Hotel of that city, to effect the organization of a Board of Trade. The project met with much encouragement and has steadily grown in numbers until to-day it has a membership of 225 representative business men. The following are the present officers: Max Meyer, president; Peter E. Iler, first vice-president; Euclid Martin, second vice-president; H. G. Clark, P. E. Iler, C. F. Goodman, M. Hellman, H. H. Meday, Max Meyer, Jo'in Evans, Euclid Martin and John A. Wakefield, directors; George M. Nattinger, secretary; John A. Wakefield, treasurer.

The corner stone of the new building was laid in May, 1886, and on Oct. 3, 1887, occurred the dedication of it. It is 68x132 feet and six stories in height, being constructed entirely of pressed brick and stone, supported by granite columns. The basement contains seven offices and a room 26x69, which is arranged to accommodate a kitchen, butler's and steward's pantries, a wine cellar, a store-room, etc. All of the basement offices are provided with fire-proof vaults and have entrances both from the sidewalk and the corridors. The first story contains four offices and a room which can be used for a dining-room. Fire-proof vaults are also provided for the offices on this floor. There are four entrances to the corridors of this floor.

The second story contains fifteen offices, the Board of Trade room, and the directors' and secretary's offices. Between the first and second stories, opening from the stair platform, is provided a large toilet room reserved exclusively for the lady clerks.

The third story contains fourteen offices, the fourth fourteen, and the fifth the same number, making a total of fifty offices in the building exclusive of the Board room and the two large rooms below in the first-story basement. The offices in the northwest corner of the building in all the stories contain fire-proof vaults.

The elevator is very large and of the latest improved style. The stairs are of oak, built round the elevator shaft with platforms at the corners. The elevator shaft is inclosed in ornamental oak posts with wire netting, and provided with a skylight at the top. Through the center of the building is a large light shaft. The Board of Trade room is finished in red oak and has three large windows in the south wall with transoms of art glass ornamented with designs, and two large skylights filled with colored glass. The wainscoting and wood finish of every description in the room will be of red oak, and the two fire-places will be built of ornamented glazed red brick and terra cotta. The heating for the Board of Trade room will be indirect. All the other rooms and corridors are trimmed in white pine, finished in oil. The basement is faced on the north and east sides with the best quality of sandstone. The entrances are of stone, with granite columns, carved caps, decorated friezes and ornamental grilles. The entire wall surface of the north and east sides above the water table are of fine pressed brick. The cornice and balustrade are of a heavy quality of galvanized iron. The carved panels and ornamental string course at the springing line of the first story windows are of terra cotta. The total cost of the structure will be about \$93,000.

Much of the success of the enterprise is due to Mr. Meyer, the president of the Board, as it was largely due to his exertions that the Board of Trade was organized. Mr. Meyer was born in Prussia, Germany, Aug. 13, 1848, and came to this country when but thirteen years of age. In 1866 he located in Omaha, and he has been prominently identified with its best interests ever since.

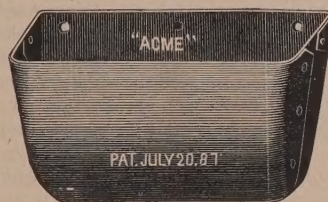
Six wheat stealers at Paris, Ill., were arrested, indicted, put through the court and sentenced to the penitentiary inside of four days.

The Saskatchewan *Herald* said in a recent issue: "The terrible havoc which the gopher is able to commit was shown a few days ago in Balgonie, where James Wilson discovered no less than 813 grains of barley in the paunch of a gopher which he had killed; and 256 kernels of wheat, some still with the chaff on, were found in the paunch of another which had been trapped before it had brought its operations so near completion.

THE "ACME" PATENT ROUND-CORNERED STEEL BUCKET.

A great deal has been printed on the subject of elevator buckets, but the claims of the latest candidate for popular favor, and one of the very best buckets ever put on the market, have been kept purposely in the background by its manufacturers until they could get thoroughly ready to furnish all the sizes proposed, and because of their being so crowded with work, and so full of orders for the large number of other specialties for handling grain, etc., that they have from time to time added to their list, and are really becoming noted for. We refer to the "Acme" Round-cornered Patented Steel Bucket, illustrated and described herewith, and to the Webster & Comstock Mfg. Co. of this city.

This company needs no introduction to the public as manufacturers of elevator buckets, being one of the first in the field by the factory process, and standing to-day, as is claimed, the largest manufacturers of elevator buckets in the United States. Recognizing the growing demand, for certain purposes, for a round-cornered, round-bottom bucket, the inventive genius of their superintendent was brought to bear on the subject early this season, and the result has been the perfection of one that has sprung into popular favor immediately, and that without scarcely an effort on the part of the manufacturers to bring it to the



THE ACME PATENT BUCKET.

notice of the public. Its points of excellence are as follows: It is manufactured of steel made from one piece, and so constructed that the laps come on the ends, making a double thickness and brace, which add largely to the strength and stiffness of the bucket. This leaves the back perfectly flat and smooth, a feature the importance of which they say cannot be over-estimated. It is argued that if a bucket does not set flat against the belt, the full surface of its back, it cannot have the proper support, and the unsteadiness thus caused will tear the bolts from the belt. Also, if its back is not smooth, or has sharp points, they will in time cut and chafe the belt and largely lessen its durability. The construction of this bucket also secures the proper dip in front, and enables it to discharge easily. The manufacturers of the "Acme" say that a bucket whose front is as high as its back cannot discharge properly, and one that is too shallow does not admit of sufficient capacity. Ample capacity is one of the best features of the "Acme." On July 20, 1887, a patent was secured, which is owned by the manufacturers, so that they can give foundation prices.

As above stated, the features of round corners and round bottoms are valuable for particular purposes, and the putting forth of this new cup is not intended, nor does it seem to lessen the consumption of the other makes of the Webster & Comstock Mfg. Co. which have so long stood the test of use and enjoy so large a trade. Their old stand-by, the "Common Sense," cut from one piece of metal, with its double ends, is very popular as an ear-corn bucket, requiring a seven-inch projection, or where a specially strong bucket is required for other purposes.

Their Empire style of bucket, with its ends double-seamed to the body, has enjoyed an enormous sale as a flour-mill cup, which is made of tin, and as a large grain bucket made of refined iron or heavy four-cross steel-plate tin, to establishments all over the United States. It is double-seamed by a steam power press, made expressly for this purpose, which is the only machine of the kind in the country. Most of the very large elevators in the West, Northwest and Southwest of from one to two and one-half millions' capacity, such as have been built during the last ten years at Chicago, St. Louis, Duluth and Minneapolis, have been supplied with this style of bucket made by the Webster & Comstock Mfg. Co. They now have on their books the contract for 11,000 20x6 heavy four-cross tin buckets for the mammoth Armour elevator now being built in Chicago, which will when completed be the largest elevator in the world, with a capacity of 2,400,000 bushels.

Space does not admit of an enumeration of all the specialties made by this company. They are head-

quarters for all kinds of elevating, conveying, loading and unloading machinery, and their trade for belt conveyors, steam shovels, spiral "backbone" steel conveyors, McDonald Friction Clutches, car starters, steel grain scoops, bag holders, loading spouts, warehouse trucks, hydrostatic levels, rotary pumps, etc., all of which are covered by strong patents, has grown to such dimensions that much of the time they can scarcely keep up with their orders, although constantly adding to their facilities and manufacturing space. They own their factory, which, together with other advantages in the line of special machinery for manufacturing, enables them to give their customers the benefit of decreased expenses in the matter of prices. First-class work and prompt shipments are the mottoes adopted by this corporation. A full descriptive catalogue and price list of their specialties can be had by addressing them at 125 and 127 Ontario street, Chicago, Ill.

TRADE IN THE SOUTHWEST.

[Special Correspondence AMERICAN ELEVATOR AND GRAIN TRADE.]

KANSAS CITY, Oct. 12, 1887.

The Exposition is under full headway, and I have been looking about for those large and costly displays of elevator and grain machinery which I was told were to be made at this time. I looked about carefully all over the vast building and did not find more than three firms who had exhibits on the place. It is astonishing that more parties have not availed themselves of the privilege that was offered them of introducing their goods to the thousands of visitors now in the city, many of whom are grain men who have come to this point to look up something new in their line. Almost every other line is well represented. There are plenty of reapers, threshing machines and all the paraphernalia necessary for the cultivation and proper housing of grains and corn, but there is not enough machinery on hand that would put up a second-rate elevator. How have the mighty fallen. Dozens of firms made applications to the directors for space early in the year, but as soon as they discovered that this was an off year for Kansas and the Southwest, they decided that it was better for them to wait until another year before coming down this way and introducing themselves to the citizens of this section of the country. The few who have come to hand it is thought will have no reason to regret their venture. Even if it does not pay in dollars and cents this year it will in the near future. Those visitors who see the machinery shown will not soon forget the parties who had the energy to attract their attention, and as soon as they are in proper shape to build and enlarge their elevators they will go to them for their supplies. The fact is that it does not pay any business men to allow a chance like this to slip by without giving displays of their wares. It pays. Men all like to see push and energy and they will reward those parties who display it in the long run, to the detriment of those who do not.

The latest reports from Kansas are to the effect that the crop of winter wheat is looking well. There is some fear expressed that perhaps some of the wheat may suffer on account of the forming of the second joint. The season is being prolonged a little too long for the best good of winter wheat. At present, of course, this is a mere surmise and when the first frosts come to hand the bulk of the wheat may be in the best condition imaginable for the snows and cold of winter. The acreage planted is not as large as during last year. The reason is evident. People became discouraged at the failure of the crop after the hard work of the season and thought it best to risk their labor in some other line. Who can blame them? If other sections of the country follow the same policy as the citizens of Kansas, Iowa and Nebraska there is little doubt but that there will be a considerable shortage of the visible supply the coming year, and wheat will reach the high prices of the good old times. The western counties of Kansas are particularly backward in planting their winter wheat, and it is said that there will not be enough produced there to supply the home demand. If this be the case there is no doubt but that Kansas next year will have all it can do to supply the people in its own borders. There is no longer any doubt but that there will be plenty of wheat the coming winter in that state to supply itself with flour and bread, if much is not sent away, but there is such a demand for money that it is thought a good deal will find its way to other centers, and this will

cause a demand from other states before the next crop comes to hand.

Elevator building has not been a success anywhere in the land during the past year, and this is the case particularly so far as the Southwest is concerned. There have been plenty of representatives of Eastern houses running through the state, but they have in no case been able to make their expenses so far as local trade was concerned. There are many elevators in this state which have been mortgaged for about all they will bring. This was done at the time they were constructed, and the manufacturers of elevator material desire to do more of their business of the cash basis and less on the mortgage plan. They discover that they already have several white elephants on their hands, and altogether they do not feel like pushing things much farther unless they see the cash somewhere in sight. Who can blame them? A burnt child dreads the fire.

If the same man who visited this city two years ago and went on the Board of Trade were to come again, he would scarcely know it. Many of the old parties who were leaders in the line of commission grain handlers have disappeared. They have either wended their way to real estate offices or are engaged in the delectable pastime of selling live stock at the stock-yards. It was a matter of life and death with them. They stood the depression as long as possible and went out, when they found themselves on the verge of starvation, to seek their fortune in some other line. Of course the bad crops had a good deal to do with this and the elevator men a good deal more. Some of the latter took your correspondent to task for his statement in a previous letter that the elevators were the leading cause of the present inanition in grain circles. They appeared to think they had been a part of the salvation army in keeping the trade here in spite of the general depletion of stocks throughout the Southwest. Well, they really do not believe what they say, of course. They know full well that their policy of getting all they could and giving the least in return is what has undermined the hopes of making this a leading winter wheat market, and they naturally try to shift the responsibility on somebody else. In this case it is on the Almighty. Heaven knows that the Lord helps those who help themselves, and does not care to turn any of his worthy servants' plans to naught. But it is as true as that the night follows the day that when the general laws of integrity and uprightness are stretched one iota, the reaction follows to the hurt of those who break these laws. If the present depression will only give the elevator men a just conception of the fallacy of their policy, there will have been a good deal accomplished for this market. Let us see what the future has in store for the elevator and commission men. "The Lord works in a mysterious manner his wonders to perform."

There are at present 452,793 bushels of wheat held in store at this point. During the past month there have been 104,416 bushels received, showing a slight increase over the previous month. Up to date during the year 1887 there have been 968,032 bushels brought into the city, as compared to 1,628,616 for the same time last year. In proportion to the total crop in the state of Kansas the decrease from last year is very significant and will show to the most skeptical that the shortage in crops is not the cause of the shortage of the flow of wheat to this city. There has not been a single sale of No. 2 red wheat on the Board of Trade during the past month, while the quotations on No. 2 soft have been for the most part merely nominal. The highest sale of the latter for the month was made on Oct. 6, 65 cents; while the lowest was on Sept. 20, 60 cents. The bulk of the millers coming here for their wheat go to the elevators and personally inspect the stocks they desire to purchase, and these sales do not figure on the floor of the Exchange. So far as sales are concerned Kansas City might as well not have a Board of Trade, for all the good it does.

There are but 51,600 bushels of corn in the elevators just now. This is about as small a supply as has been here for many a year, and there is no telling when this will reach much lower, as there is very little coming to hand just now. It is thought that the bulk of the supply in Kansas will never be brought to this city, as the farmers prefer to feed it to their hogs, feeling that they will be enabled to get a bigger profit out of it in this manner than if they tried to dispose of it directly to dealers in grain. At the present condition of the corn market and the low prices at which hogs are selling, it is doubtful if this policy is the best. However, it is held that in the near future there will be a decided improvement in the hog market, and that it will in the end reimburse the

farmer to follow the policy he has laid out for himself. For the month there have been but 40,260 bushels of corn brought to this market and put in the elevators, making for the year 800,864, as compared to 1,589,313 bushels for the corresponding time last year—a most significant shrinkage. The demand for corn is right along up to the supply, and there is little doubt but that the visible supply will be kept at the lowest point right along for the rest of the year.

CORN SHELLER.

BY C. W. MARSH IN "FARM IMPLEMENT NEWS."

[Continued from last month.]

In the previous article I described early methods of corn shelling, and presented to my readers early shellers of several types, from which most of the perfected machines now in general use have been developed. The first shelling was done by hand, and invention began with the first devices to aid the hands. Some of these I have described. They were crude, and simply designed to remove or to assist in removing the corn from the cob without regard to separation or delivery—the kernels falling upon the floor, or in a basket or tub (by the courtesy of J. A. Field, St. Louis, we are enabled to show a tub sheller used in Ohio over forty years ago—see illustration); and the first cylinder sheller worked in a bin throwing the corn all about. Encasing them so as to prevent scattering caused also a direct delivery, and the next thing was to effect a separation of cobs from corn. The first sheller that I find description of was made in England, about sixty years ago. It had a roughened disc—the embryo "picker-wheel" or "straight runner," against which by means of a chute the ears were held while the corn was being rubbed or rolled off the cobs; the kernels passed down through a funnel below, and the cobs were cast out behind. This old English machine, which I presented in the preceding paper, was the prototype of the "picker-wheel" class of corn shellers, which has been the ruling class down to this day. Shellers are also classified according to size and purpose for which constructed. Hand shellers are provided with cranks and the operator applies his own power thereto. These small machines are only intended for home service on farms. Power shellers have greater capacity and are turned by horse or other power; those made for horse power are usually intended for farm to farm service like ordinary threshing machines, and if for steam or water power for use in warehouses, etc., but these distinctions are merely general, for they may be used wherever specially required.

Some time during the "forties" David Clinton of Connecticut, I believe, constructed a sheller of this type, adding as his invention the bevel or feed wheel, with chute and other shelling parts arranged substantially as they have been since, and as I described them in last paper. Others soon followed with various improvements, but Mr. Clinton was probably the first man to make a marketable sheller in the United States. I regret my inability to get any particular account of him or of his operations; I certainly have sought for it. Carr & Hobson of New York City bought out the old Clintonville works and still make his sheller. Who first in this country made provision for separating the cobs from the shelled corn in the "picker-wheel" class of shellers, I cannot discover, but he only improved the principle applied to this purpose in the old English machine mentioned. At any rate the little "Burrall" had such a separating device; the cast shell in which the shelling wheels were inclosed being so arranged in relation to the large sheller wheel (picker or straight runner) as to hold the cob, after the corn was shelled from it, pressed lightly to said large wheel in its revolution until it—the cob—arrived at an opening in the case through which it was discharged by its centrifugal momentum. Early in the "fifties" the slatted cob rake or riddle, on which the cobs were carried off—the corn sifting through—was introduced; and soon after came the fan for blowing out the light impurities. I cannot learn who first applied either of these devices, but the now venerable Augustus Adams as early as 1854 or 1855 at Elgin, Ill., made some two-hole hand shellers with cob rakes, of which the following is a description: Slats of wood were arranged on a pair of leather belts, spread wide enough apart so that the slats, extending across from one to the other of the belts, would about cover the width of the double set of shelling wheels; the inner end of said carrier or cob-rake reached under the shelling wheels, and the outer end—somewhat higher—projected behind so as to deliver the cobs free of the machine. The slats were so shaped as not to present flat surfaces for the shelled corn

to ride on, but allowed the latter to pass freely through and down the delivery chute. About 1858 Mr. Adams produced a flexible iron cob rake, which has proved to be one of the most valuable features of the modern "Adams" shellers. It was a rake made of iron or steel rods—three-sixteenths to quarter-inch round, according to the size the machine rake was intended for—each rod forming a link, the ends being so peculiarly turned that, joining with those of the next link or rod, perfectly flexible connections were made; the rods formed the slats across, and enough thus connected made a thoroughly flexible iron apron riddle, as pliable practically for its purpose as cloth or leather, which besides being durable, presented small round surfaces upon which the kernels could not ride out and be wasted. The simple and very effective machines for bending the links perfectly, and constructing the rakes, were invented by H. A. Adams, now superintendent of the Sandwich Manufacturing Company, Sandwich, Ill.

[TO BE CONTINUED.]

THE GOVERNMENT CROP REPORT

The statistical report of the Department of Agriculture, published on Oct. 10, makes an increase of only half of 1 per cent. in the condition of corn. The past month has been very generally favorable, but the status of a large part of the crop was fixed at the date of the previous report. The general average of condition is 72.8 instead of 72.3. The average of the seven surplus states is 64.9 instead of 64.2 in September. This is a lower condition than has ever been reported, except in 1881, when the average was nearly seven points lower, and the average yield 18.6 bushels. The indication is now for a yield of a small fraction over twenty bushels per acre. The exact area, exclusive of that cut for fodder as not worth harvesting, is not yet determined. Slight uncertainty regarding it may cause a variation in the final record of 1 or 2 per cent. from 1,500,000,000 bushels.

The test of threshing has not materially enlarged the average rate of the wheat yield, which appears to be about 11.8 bushels or four-tenths of a bushel less than last year. The increase of acreage, which is large in Dakota, will make partial compensation and bring the product nearly or quite to 450,000,000 bushels. The rate of yield in New York is 16.7 bushels; Pennsylvania, 10.5; Ohio, 12.4; Michigan, 13.3; Indiana, 15.5; Illinois, 15.2; Wisconsin, 10.3; Minnesota, 9.5; Iowa, 10; Missouri, 17; Kansas, 9.6; Nebraska, 10.7; Dakota, 10.5; California, 13.8.

The yield of oats is slightly below an average, about twenty-five bushels per acre. The product is fully 600,000,000 bushels. In the principal states of the central valley region the state averages range from twenty-five to thirty bushels. The barley yield is nearly 20 per cent. less than a medium yield or about twenty bushels per acre. New York 20.3, Michigan 19.5, Wisconsin 18.5, Minnesota 19, Iowa 19, California 20.5.

The yield of rye is 11.5 bushels per acre, and the product about 24,000,000 bushels.

There has been a drop in the condition of buckwheat from 89 to nearly 77.

The condition of potatoes has declined from 67.3 to 61.5—partly from appearance of rot in the Atlantic states.

EXCESSIVE TERMINAL CHARGES ON THE ERIE CANAL.

For a number of years the canal boatmen have been endeavoring to procure a just legislation in the matter of reducing the excessive terminal charges made by the elevators at Albany and New York. So far they have not been successful. A pool of thirty-four elevators was formed in 1880 at Buffalo, of which a portion were owned by the Central and Erie roads and the remainder by individuals. Of this number but twelve were working elevators, but the money earned was divided among all of them. The terminal charge for transferring the grain is more, it is said, than for transporting it 500 miles by canal and river through the state, amounting to one cent a bushel at Buffalo and a fraction over 1 3-10 cents at New York. This unreasonably high rate is impairing the commerce of the canals and seriously affecting the interests of both the carriers and the states.

Wheat dealers are dissatisfied with the management of the San Francisco Call Board, so says a local paper.



[We invite correspondence from every one in any way interested in the grain trade, on all topics connected therewith. We wish to see a general exchange of opinion on all subjects which pertain to the interests of the trade at large, or any branch of it.]

WILL BUILD AN ELEVATOR.

Editor American Elevator and Grain Trade:—I am about to build an elevator at this place. I was connected with an elevator at Midland, Ont., for some three years, and saw your paper, which was taken by the company. Please send me a sample copy.

Respectfully yours, Wm. L. ATWATER.
Somerset, N. Y.

CHANGE OF FIRM.

Editor American Elevator and Grain Trade:—Inclosed find postal note for \$1 for our subscription to the AMERICAN ELEVATOR AND GRAIN TRADE for one year. The paper heretofore sent to H. Edmonston is to be discontinued, and sent to us, as we are now running the elevator at this place.

Yours truly, VANNERSON & Co.
Augusta, Ga.

SOME NEW ELEVATORS IN VIEW.

Editor American Elevator and Grain Trade:—Inclosed please find \$1 for subscription to the AMERICAN ELEVATOR AND GRAIN TRADE for one year. I have concluded to put up several elevators by next spring, and I thought of getting your paper to find out who are the best elevator builders, and to get some good firm to put up a few for me by next spring.

Yours truly, M. C. THEISEN.
Artesian, Dak.

UNLOADING CARS AT A DISTANCE.

Editor American Elevator and Grain Trade:—We wish to ascertain about some device for unloading cars at a distance from the building. Is there not some plan by which pipe or large hose can be inserted into the carload of grain and sucked through same into the building by the use of a blower?

Yours truly, THE GREENWAY BREWING CO.
Syracuse, N. Y.

[We know of no such device. Perhaps some of our readers can advise about this matter.—Ed.]

ITEMS IN ELEVATOR BUILDING.

Editor American Elevator and Grain Trade:—The writer is contemplating the erection of an elevator of from 500,000 to 750,000 bushels' capacity. I would like to know whether it is cheaper, where land is no item, to enlarge your foundation or go up for capacity. Further, I would be pleased to know the height of foundation, thickness, etc., and the best material to use for same.

Yours truly, "C."

[Will some of our practical readers give their views on the subjects above named.—Ed.]

SETTLEMENT OF THE LOUISVILLE TROUBLE.

Editor American Elevator and Grain Trade:—In the September number of your paper you had an item in regard to the fight between the elevator men of this city and the Louisville. Inclosed is a copy of the circular issued by the Bridge Co., in which they acceded to the demands made. Every car of grain was stopped in the yards of the different companies using this bridge until they were completely blocked.

Yours truly, J. W. BRIGMAN.
Louisville, Ky.

[Following is the circular alluded to:]

LOUISVILLE, EVANSVILLE & ST. LOUIS
LOUISVILLE, NEW ALBANY & CHICAGO
JEFFERSONVILLE, MAD. & INDIANAPOLIS
OHIO & MISSISSIPPI } RAILROADS.

LOUISVILLE, Sept. 9, 1887.

On and after to-day carloads of freight reaching Louisville by either of the above roads and Louisville Bridge consigned to parties or firms whose warehouses, elevators, switches or yards are located on line of Louisville Bridge Company's tracks, and all carloads of freight at such places to be shipped over above-mentioned roads and the

Louisville Bridge no charge will be made over and above the established tolls of the Louisville Bridge Co. for freight to and from Louisville proper.

Any carload freight reaching Louisville, not so consigned, and stopped in the yards of above-mentioned roads in Louisville, if moved thereafter, the Louisville Bridge Co. will make its usual charge for such service.

Signed by

L. S. PARSONS, G. F. A. L. E. & St. L.
S. PHILLIPS, G. A. L. N. A. & C.
R. W. GEIGER, G. F. A. J. M. & I.
J. R. CLARK, G. A. O. & M.

A CORRECTION.

Editor American Elevator and Grain Trade:—In your last issue I notice occurred this item: "Prinz & Ulrich, Peoria, Ill., will erect a new malthouse to take the place of the one lately burned. The main building will be 70x100 feet and six stories high; the elevator 25x25 feet and 65 feet high, and a double kiln 30x30 feet and 90 feet high." The name should be Prinz & Ulrich. We have, however, dissolved partnership, and I will erect and operate the malthouse and barley elevator personally. It will have a capacity of about 1,200 bushels per day.

Respectfully yours, Wm. H. PRINZ.
Peoria, Ill.

THE HENNEPIN MEN.

Editor American Elevator and Grain Trade:—I cannot see why the advocates of the Hennepin Canal should feel so sore about other movements toward increasing the value of other waterways in Illinois. Yet they seem to take every such movement as direct antagonism to their own pet scheme. It should not be forgotten that if the Hennepin Canal were built to-day its value would be very small. It is in reality the last link in the system of waterways, and will never be of great value unless water transportation between Chicago and Hennepin, or rather La Salle, is improved. When that is once done, the necessity of constructing the Hennepin Canal will at once become apparent.

Very truly yours, W. J. M.

SPEED OF ELEVATORS.

Editor American Elevator and Grain Trade:—Will you please tell me how fast (how many feet per minute) an elevator elevating shelled corn with cobs to be cleaned above ought to run in order to do the best and most work.

Yours truly, L. K. BENSLEY.
Vail, Iowa.

[The proper speed of elevators is determined not by the speed per minute, but by the size of the pulley. The usual rule is to give the head pulley, whatever its size, from 35 to 45 revolutions per minute, without regard to its size. This rule, for a 24-inch pulley, gives from 200 to 250 feet per minute, and so on up to a 60-inch pulley, where the speed of the belt would be from 500 to 550 revolutions per minute.]

THE GREAT BELTS, AND LINES OF COMMERCE AND NAVIGATION.

Editor American Elevator and Grain Trade:—A year ago, in the columns of the AMERICAN ELEVATOR AND GRAIN TRADE, a brief outline was presented of a project for a trans-Pacific railroad, leading from the Sea of Japan to the Caspian Sea, and so connecting and completing great belts of steam transportation and travel around the world through the heart of the temperate zone, and opening to civilization and commerce the vast and almost unexplored interior of Asia.

Doubtless the project seemed remote, and perhaps visionary, to most readers, as it had seemed a year before in Boston. But now—behold!

A great Chinese and American company has been formed for a great silver bank, and also for telegraphs and railroads for that vast empire, whose provinces alone have a co-terminus boundary with Russia's Asiatic possessions for more than 3,000 miles.

No longer, then, is the greatest railroad project of our day remote, or even beyond the reach of that true and healthy enterprise which gambling and imposture have impeded in our land, and injured the true and wise advance we need.

China is not a decaying mass of humanity, but a vast and concrete power, about to put on the panoply of modern civilization, and go forward. May she go right. And for this her own provinces, extending westward from the broad Pacific three-fourths of the whole route to the Caspian—or further than from New York to San Francisco—furnish an ample field, when once the iron horse is domesticated in China. In the natural order of things, our people and country should assist in doing this.

The things we have to spare are just what they need, and vice versa. No country on earth can better assist China to advance than our own country, and none can more benefit us, in a commercial, industrial and financial sense.

This is illustrated a little by the intelligence we have within a few days that they are offering \$200 per month for telegraph operators to go to China. This is in itself a highly suggestive fact.

But behind it, and correlative with it, are a vast set of great facts, ripening to a rich maturity, and claiming the attention of our statesmen and people. Commerce needs to be rehabilitated. And board of trade and stock gambling needs to be suppressed, or kept in honest bounds. The great work of De Lesseps at Darien will not fail, no matter how many false reports of its failure are published, or how many errors are set afloat by stock gamblers who fear the effect on Pacific Railroad stocks.

By day and by night it is going on. Lighted by 7,000 electric lamps, and using all the best appliances of labor, science and art, its administration is superior in every way to its assailants, and represents grandly the advance of the age in the direction of utility and peace. The greatest work of the world, it has received a treatment from our country that if continued longer will surely do vast injury to the great interests of our country. By it our ports, and every rod of all our coasts, will soon be brought practically vastly nearer to half the world than ever before, and if prepared we will then be able to trade with hundreds of millions of people on better terms for them and for us than ever before possible. South America, Asia and Australasia will be in entirely new positions toward us. And this at a time when the notes of a great advance have been sounded, and a great advance has begun, in all those vast regions, that no human power can stop, and which Christendom should aid in a high, true and honorable way.

Are we prepared to take our proper part in the changed position of affairs that is approaching? Certainly we are not, even in a material sense, for our navigation has long gone backward, against the general current of the world's advance. It has disappeared from the Mediterranean, and from the seas surrounding the Eastern Hemisphere. And in the Southern Hemisphere it is now a rare sight to see the starry flag of this Union. Even at home, in the very heart of this Union, the economic movement and combination of minerals, forest products and many cheap and bulky commodities is rendered impossible by the amazing obstruction of rivers, and the continued disconnection of rivers and lakes. This connection between Lake Michigan and the Lower Mississippi by the line of the Illinois is unquestionably the most important freshwater link of connection on the globe. And although of very moderate cost and difficulty, comparatively, yet in importance it ranks with the works of De Lesseps at Suez and at Darien. But two full generations of talk have not accomplished it. And only since May 31, 1887, are all legal impediments removed that have been in the way of a national work. That day came the tardy cession of the locks and dams in the river to complete the act of 1822, which expires Nov. 22, 1887. Yet still the everlasting debating society continues. There is no reason why Congress might not be convened a few days earlier than their usual time, and accept the cession by Illinois before it expires, and provide at once for doing the work.

But the politicians seem to look upon this as the old pettifogger looked upon the prompt conclusion of a life-long lawsuit by his son. And we have no right to hope that the prayer of Bishop Spaulding at the Peoria convention will be answered if we fail to do our duty and see that the politicians do theirs. We need to advance, and that in a high and true spirit, looking to the Great Ruler of all for aid—but doing our manly duty the best we can.

We need at once to ask the President to convene Congress in November for this especial object, which is now the very key of the whole question of American navigation and all its vast correlatives, in a crisis great and manifold, and which, alas, but few realize. And as none can solve the mystery of past errors affecting American navigation, so none can forecast the dangers of delay in this most remarkable crisis.

W. T. STACKPOLE.

Fairbury, Ill., Oct. 13, 1887.

Chicago is rapidly losing her supremacy as a wheat market, the record for the past year standing as follows: 1, Minneapolis, 34,904,260 bushels spring; 2, Duluth, 22,424,951 bushels spring; 3, Toledo, 16,978,818 bushels winter; 4, Chicago, 16,771,743 bushels, winter and spring. —Exchange.



The leather belting establishment of C. G. Carleton & Co., at 187 Lake street, this city, was burned out by fire Sept. 30, as well as the Clinton Wire Cloth Co.

The Page Belting Company, of Concord, N. H., are very busy with orders. Among the shipments recently made is the belting and lace leather for the new works of the Northern Pacific Terminal Company, at Portland, Ore.

H. Stopes & Co. of 24 Southworth street, London, Eng., are now foreign agents of the Avery Elevator Bucket Co. of Cleveland, and hereafter will carry a large stock of the Seamless Steel Elevator Buckets constantly on hand.

The A. P. Dickey Mfg. Co. of Racine, Wis., appears to be taking a front place in placing their warehouse mills and dustless separators in grain elevators, as their Minneapolis representative informs us of placing nearly fifty of them in a single week.

The Cambridge Roofing Co. of Cambridge, Ohio, are having a large trade on their Crowls Patent Iron Roofing. In order to keep up with orders they are obliged to work both day and night. The excellent merits of this roofing create a large demand for it from the building public.

The belt manufacturers of the United States held a convention recently at the Metropolitan Hotel in New York City. The object of the meeting was to ascertain what could be done in order to improve the present condition of the belt trade, and whether better prices could not be obtained.

The Roller Chain Belting Co. of Columbus, Ohio, manufacturers of detachable chain belting and mining machinery, have purchased a three-acre tract of land, and will at once erect a new plant. Their business has grown to such an extent that their present works are inadequate to supply the demand for their machinery.

A St. Louis man has invented an automatic grain scale. It consists of a box with inclined partitions placed on an ordinary scale. Within this box is a revolving pan supported on a rocking lever. Attached to the lever is an upright, upon which rests a vibrating valve for the purpose of cutting off the overflow of grain. Extending down from this valve is a rod that disturbs the equilibrium of the grain when the pan is full and causes it to discharge itself. The grain pours through the main opening until the pan contains almost the required weight; then the lever upon which the pan rests rocks and partially cuts off the flow. The grain now runs in a very small stream until weight is completed, when the box descends and the scale beam rises, breaking the electric circuit, which, acting on the electro-magnet, causes the supplemental valve to cut off the grain completely.

The following is a list of the boiler sales of the Babcock & Wilcox Boiler Co., of New York, for September: United States Electric Lighting Co., Newark, N. J. (fourth order), 164-horse power; Voight Milling Co., Grand Rapids, Mich. (second order), 140-horse power; Carmela G. Lagana, Palermo, Sicily, 40-horse power, Walker Bros., London, for Colombo, Ceylon, (fourth order), 25-horse power; M. Lasig, Chicago, Ill. (second order), 125-horse power; House of Representatives, Washington, D. C., 73-horse power; M. Cosserat, Amiens, France (third order), 84-horse power; Tiberghien Freres, Turcoing, France (second order), 240-horse power; Walker Bros., London, for Colombo, Ceylon (fifth order), 15-horse power; Edison Machine Works, Schenectady, N. Y. (making thirty-seven orders from the various Edison companies), 150-horse power; East London Water Co., Waltham Abbey, Eng. (second order), 93-horse power; Anglo-American Brush Electric Corporation, Bosworth, Eng., 20-horse power; S. B. Wilkins Co., Rockford, Ill. (second order), 61-horse power; Indiana Soldiers' and Sailors' Orphans' Home, Knightsville, Ind., 240-horse power; Sr. Don Julio, F. Opestequia, Cienfuegos, 736-horse power; Electriciteits Maalschappy, Berlin, Ger. (third order), 45-horse power; Electriciteits Maalschappy, Berlin, Ger. (fourth order), 45-horse power; Harlem Lighting Co., New York City, 300-horse power; Fowler Bros., Sioux City, 548-horse power; McWhirter, Fergu-

son & Co., Edinburgh, Scotland, 40-horse power; Chicago Sugar Refining Co., Chicago, Ill. (second order), 816-horse power; J. & G. Fowler, New York City, for export, 438-horse power, making a total of 4,438-horse power.

THE PNEUMATIC GRAIN TRANSFER BARGE.

The pneumatic grain transfer barge "Cyclone" reached Buffalo from Cleveland on Oct. 9. The "Cyclone" has been previously described in these columns. It is mounted on a square-shaped barge. Lyman Smith, its inventor, has long wanted to show what it could do in unloading grain from vessels into boats, and now hopes to get a fair chance to do so. The operation of the machine is simple. The grain is sucked through a fifteen-inch tube from the vessel's hold into an iron balloon-shaped receiver on the barge which holds 2,000 bushels and is fitted on scales. The suction is created by exhausting the air out of the receiver by means of two engines, each fifteen by twenty-four inches. After the grain is weighed it is forced out of the receiver by a strong pressure of air into its top and conducted through pipes where wanted. Smith claims he can transfer grain at a total cost of half cent a bushel and make 100 per cent. on the investment by handling only 18,000 bushels per day. The present cost to do the same work here now is 1 1/2 cents. By Smith's plan no shoveling or trimming is needed. The barge and machinery cost about \$25,000.

Smith is well aware that he has two strong elements to contend against—the great amount of capital invested in the elevators here, and the thousand and odd grain-shovelers who would be thrown out of employment should his plan be generally adopted. The scoopers belong to the Knights of Labor, and would undoubtedly make a big fight against this anti-shoveling apparatus. Smith says one of his receivers and engines with connecting machinery can be built for \$10,000 and used with the present elevators instead of the outside leg, the internal workings being the same as now. This would do away with hand and steam shoveling, and thus effect a large saving. The apparatus, it is claimed, can transfer 12,000 bushels per hour. Smith says he has been promised some grain to transfer, and the result of the attempt will be watched with interest. A gang of dock laborers visited the barge and made remarks that led Smith to keep good watch on his barge. He had it towed out of reach from the docks.

THE UNION ELEVATOR AT DES MOINES.

The Union Elevator Company of Des Moines, Iowa, was organized some months ago, and they now have in active operation an elevator with a capacity of 300,000 bushels of grain, which is doing an extensive business. Grain is received into the elevator from all parts of the state, cleaned and put into proper shipping order. Corn is shelled and returned into the same car through a powerful sheller, which shells from ten to a dozen cars per day. The *Daily Register* of that city cites the following instance of quick delivery of grain from this elevator: A cargo of grain was recently shipped from here direct to the Mediterranean Sea, only breaking bulk once from the time it left this elevator until it arrived at Gibraltar, at the Western entrance of the Mediterranean. In order to give the details of this shipment, it will be necessary to first understand that this cargo had to come from several towns and hamlets along the different lines of railroads in Iowa, or, in short, direct from the farmer, whence it was received in the elevator to be cleaned and made ready for the shipment. The vessel carrying this cargo of oats was chartered to arrive in Chicago at a certain date; then when all was ready at Chicago, the shipment (some 30,000 bushels) was loaded in cars at the elevator here and shipped within six days and placed on board the vessel at Chicago ready for its long pilgrimage to the far Eastern sea, thus completing, for the first time in the history of the city, an entire through shipment of grain from the hands of the producer to the consumer abroad.

The facilities for handling this amount of grain so quickly lie in the fact that the latest improvements made in elevators of to day, were used. A large "hopper scale," which weighs quickly and accurately a carload of grain; a "steam shovel" for unloading the cars by steam power, and a rapid fan for cleaning the grain, all working by the finest engine within any elevator in the state, make up

some of the improvements which handle the grain so rapidly.

Since July 1 upward of 200 cars of grain have passed through the elevator. Des Moines expects to soon have a system of grain inspection, which will give her a leading place in the grain markets of the West. The business of the elevator is under the direct charge of Mr. H. C. Colver, general manager, and through his foresight and long experience it has been made a complete success. Mr. W. F. Harriman has charge of the machinery and the running of the elevator.

TROUBLE AMONG THE TICKERS.

The war of extermination waged against the bucket shops by President Wright of the Chicago Board of Trade, is evoking considerable adverse comment even among the opponents of that exorcism of the exchanges. Both the Postal and Commercial companies, whose tickers have been placed in almost every commission office in this city, have been unceremoniously bounced, to the great dissatisfaction and inconvenience of their customers. The managers of the Postal denied the charge that they had furnished quotations to the bucket shops, and although their wires were leased to several such concerns, they had no connection with the Board of Trade. They refused to violate these leases and were at once ejected from the floor of the Exchange. A few days ago the Commercial company was suddenly cut off, on the charge that it was supplying quotations to Boston bucket shops. This was denied and proof furnished that it was not the Chicago company, but the New York company which was furnishing the quotations to Boston, and that they were not the Chicago figures, but those of the New York Produce Exchange. These two companies being, however, prohibited from carrying on business in the Chicago Board, their customers have been obliged to go back to the Western Union. And it is just here that the shoe pinches. The friends of the proscribed companies look upon the whole proceeding as a scheme to turn the entire business into the hands of the Western Union, whose monopoly of former years was broken by the reduced rates offered by the Postal and Commercial. It is claimed that while the Western Union has repeatedly violated the orders for withholding quotations to unauthorized parties, such violation has been overlooked by the president of the Board, or but slightly reprimanded. The members of the Board of Trade at any rate, are much dissatisfied with the policy of President Wright, and do not hesitate to so express themselves. On the other hand Mr. Wright denies all collusion with the Western Union and says such talk is merely for the purpose of creating sympathy for the bucket shops. The fight is likely to prove a lively one before it is over.

GRAIN ELEVATOR FIRES.

Two hundred and sixty-eight fires in grain elevators and storehouses in the United States reported in *The Chronicle* fire tables during three years ending with 1886 show as to losses:

An aggregate property loss of.....	\$3,994,318
An average property loss of.....	14,904
An aggregate insurance loss of.....	2,493,366
An average insurance loss of.....	9,304

AS TO CAUSES OF FIRES:

Number of fires from unknown and not reported causes.....	128
Number of fires due to exposure.....	66
Number of fires, reported causes, aside from exposure.....	74

Reported causes, aside from exposure, distributed as follows:

Incendiarism.....	31	Engines and boilers.....	3
Sparks (locomotive).....	12	Tramps.....	2
Friction in machinery.....	10	Spontaneous combustion.....	1
Lightning.....	7	Stove.....	1
Defective flues.....	3	Accident (not otherwise reported).....	1

The apparent chief cause of fires in grain elevators and storehouses, as ascertained from the reported causes, aside from exposure, is incendiarism. Percentage of incendiary fires, reported causes, aside from exposure, 41.9.

A twelve years' record of the number of grain elevator and storehouse fires (money losses and causes not given in *The Chronicle* fire tables prior to 1884) shows an average burning of 44 annually.—*The Chronicle*.

On the night of Oct. 5 a burglar entered the residence of Capt. W. C. Hardwick, the Mississippi River corn king, at Memphis, Tenn., and robbed Mrs. Hardwick of her bustle, which she wore in bed because it contained \$7,500. Well, truly, there are bustles and bustles.

INCIDENTALS.

Dangerous elevators—whisky straights.—*Ex.*

Broom corn is worth \$75 a ton at Vermillion, Dak.

The first successful cultivation of corn by the English in North America was on the James River in Virginia in 1608.

A statement recently prepared by the Winnipeg Board of Trade shows that the wheat crop of Manitoba this year is 12,000,000 bushels.

The *Times* of Leavenworth, Kan., says that Kansas will show up 100,000,000 bushels of corn this year in spite of the so-called failure of the crop.

The largest yield of corn so far reported from Dakota is that of A. Beck of Lincoln county. He has a forty-acre field that is yielding him 3,000 bushels.

We suspect that little Jack Horner was once a Chicago speculator. You know it is written that he was in a "corner" and pulled out a "plum."—*Lowell Citizen.*

A farmer near Alton, Kan., sowed wheat on a Friday, and the following Monday the wheat was up large enough to be seen over the field. That beats the corn crop all to pieces.

"Mrs. Doolan, phwat are these bucket shops Oi hear 'em talkin' about?" "Oi donno, Mrs. Murphy, unless it do be these places the b'ys goes to whin they rooshers the gro wler."—*Washington Critic.*

Bloomington, Ind., boasts a man who wears a No. 17 shoe, which by actual measurement holds one and one-fourth pecks of corn. His name is Smith, but his foot redeems him from commonplaceness.

Some of the farmers in the vicinity of Washington, Ill., began to husk and crib their corn during the week of Sept. 23, and a local paper says: "The like was probably never done here before—cribbing corn on the autumnal equinox!"

A great deal of crooked brush appeared among the broom corn this season. From twelve acres of corn one man got twenty bales of crooked. A bale of crooked corn ought to weigh about 250 pounds, and fully one-half the corn grown in many fields was crooked.

Broom-corn raisers seem to have taken warning by last year's experience, says the *Arcole* (Ill.) *Herald*, and have learned that the time to sell is when buyers are in the market. The result is that the crop is being rapidly marketed. Seventy-five to eighty dollars per ton is the general selling price.

An exchange offers the following cud for those farmers to chew who are always sighing for the "good old times": "Sixty years ago a bushel of wheat would buy only two yards of calico or shirting, now it will buy fifteen or twenty. Then a bushel of corn would buy only a pound of nails, now it will buy ten."

The average quality of barley in barley-growing sections is generally poor this year, owing to the unfavorable season. There was first an excess of hot, dry weather, shrinking the grain while it was filling. This was followed by a rainy spell, lasting through the harvest time. Bright, plump barley should command a good price this season.

There were 2,696,858 acres of wheat harvested in Ohio this season, which produced an average of 13.1 bushels to the acre, making a total crop of 36,724,480 bushels. The average product of oats per acre was 30.7 bushels, and of barley 25.7 bushels. The probable total crop of corn, compared with a full average, was 65 per cent., and of rye 96 per cent.

The secretary of the Kansas State Board of Agriculture reports 6,520,423 acres as the area in corn in that state this season. 2,520,332 acres, or 40 per cent. of the area planted, is not worth husking, leaving 4,000,096 acres, which, it is estimated, will yield 82,557,258 bushels of corn. This is only 49 per cent. of the average annual crop for five years. It is estimated that the old corn on hand and this year's crop will about supply the wants of the state. Those states which usually import corn must look elsewhere than to Kansas for supplies. Missouri has

a much better crop of corn than it was supposed she would have, and the prospects are that good prices will be obtained.

Mr. Hayseel (to wife, who is returned from church)—"What was the sermon about?" Mrs. Hayseel—"Suthin' about Joseph goin' daun to Egypt to buy corn." Mr. Hayseel—"Did the dominie say what corn's wu'th daun there?"—*The Epoch.*

One year ago, says the New York *Evening Post*, storage room for wheat at Duluth was at a premium, and the stock of wheat in store was 8,550,000 bushels. At the present time warehousemen are desponding on account of business, and the stock of wheat is only 921,289 bushels. The same state of affairs exists in Chicago, and some of the grain-storage men are offering to store grain for two months free of storage charges in order to get merely the charge for elevating.

Complaints come from Claremont, Dak., of the inability or neglect of the Manitoba Railway Company to furnish the necessary cars for the shipment of wheat. The elevators and warehouses are full, and the farmers are obliged to haul their wheat home after bringing it to market. The empty cars are taken by main force. Farmers are unable to meet their payments and obligations which are now coming due, on account of not being able to dispose of their crops. The board of railroad commissioners have been appealed to in the matter.

The area cultivated in wheat in the United States aggregates over 35,000,000 acres; a saving of one bushel per acre in seeding this vast area will add 35,000,000 bushels to the crop for sale. This is equivalent in money value to about \$25,000,000. An increase of five bushels per acre in the yield will give an increased production of 125,000,000 bushels, worth about \$125,000,000. Add to this immense sum the foregoing sum of \$25,000,000, and we have the astonishing sum of \$150,000,000, which represents the increased resources of our own soil, without any addition to our labor, if we can save one bushel per acre in seeding our crop and increase the yield five bushels per acre. Of course, if the saving of seed was only one-half bushel per acre, it would alter these figures, and again, if we can increase the yield eight to ten bushels per acre, which claim is possible, the figures will be greatly augmented.—*Minneapolis Farmer and Stockman.*

It is announced semi-officially that "Old Hutch" is "evening up," and that, when his present trades are all closed, he will not speculate any more. The writer remembers very well the last time Mr. Hutchinson "swore off." It was in 1884, when he was the life of the "call," frequently trading in a million of grain, or 30,000 tierces of lard or barrels of pork, with the few minutes given to each property. It was said that Charley Hutchinson asked the old gentleman not to plunge around any more. He gave the promise, and day after day he used to stalk into the "call" and watch the trading without opening his mouth or breaking his promise. The McGeoch lard deal was being run then, and the excitement ran pretty high. It was only a few days before the collapse that the excitement and surroundings got the better of "Old Hutch's" good resolutions, and he made a bid. The whole Board was alive to the incident in an instant, and there was a mighty yell. It lasted some moments—as the yells there used to. From that time to this Hutchinson has been in the market continuously on a huge scale. Not always, either, successfully. He told an acquaintance that he had lost \$300,000 more than he had made in the new building.

Maurice Rosenfeld, the lamented clique broker, is having a hard time making a settlement with his creditors at 25 cents. Several of the largest, who for three months have stood out and flatly refused to settle for anything less than 100 cents, have after much persuasion been induced to accept the terms offered, because they saw no prospect of getting more and did not propose to stand in the way of a majority of the creditors, many of whom needed the money to straighten out their own affairs. Only five creditors now refuse to settle, and their claims aggregate \$20,800. Mose Fraley, the St. Louis plunger, stands out for \$6,400; Commissioner Murry Nelson, for \$6,200; George C. Eldredge, for \$2,600; J. J. Bryant, for \$3,100, and F. F. Wood for \$2,500. It is regarded as rather singular that Fraley should stand out and expect Maurice to pay him in full. It is not more than three years ago since the local crowd of speculators went gunning for the enterprising St. Louis plunger and brought him down in good shape after he had cleared over \$100,000 here in a few months. He settled with his creditors

in full by paying cash and notes, and should give Maurice a chance to settle. One or two of the other creditors have been in tight pinches, and as life on the Board is decidedly uncertain they would do a good act by making the best of a poor settlement, and not keep over fifty others out in the cold all winter.

Prof. Forbes in the *Indiana State Sentinel* gives the following account of an experiment with chinch bugs that was reported to him. "A field of twenty-eight acres was sown to wheat in the fall of 1874, when the chinch bugs were devastating certain regions in Indiana, twenty acres with timothy, and the remaining eight without, timothy being sown in the latter in spring. This eight-acre plot, like the rest in every respect except that mentioned, was overwhelmingly infested by the chinch bug, the grain at harvest yielding only seven bushels per acre, while the twenty acres, bearing a thrifty growth of fall timothy, remained wholly unaffected, except for a short distance adjoining the other plot, and yielded an average of twenty bushels to the acre. The latter wheat sold as 'No. 1' at \$1 per bushel, and the former as 'rejected' at 65 cents.

THE FIRST REAPER IN INDIANA.

A late number of the Indianapolis *State Journal* contains an interesting account of the first use of a reaper in that state. It was employed by Nicholas McCarty, the founder of the industrial interests of Indianapolis, in 1851, on his "Bayou farm," now the chief portion of one of the suburbs of that city. The new machine, which was one of the McCormick make, created a great deal of excitement, and it was looked upon as something wonderful, but did not come into general use until some years later. The first exhibition of machine threshing was at the state fair in 1852. There were two machines entered, and though the threshers had been used by private parties before, this was the first public exhibition, and a contest between the two machines was witnessed with great interest.

GRANARIES IN ROUMANIA.

With a view to encourage the grain trade in Roumania, the Government of that country has resolved upon the erection on a large scale of grain warehouses or elevators in the ports of Braila and Galatz. Their dimensions will be colossal, and they will, of course, possess correspondingly gigantic capacities for grain storage. The erection is contemplated of two such warehouses in each of the ports in question, and each establishment will be fitted with cleaning machinery capable of treating 3,000 sacks of 100 kilos, (220.46 lbs.) in one hour. The plant of machinery used for this purpose will consist of aspirating machines, grading cylinders, triers and automatic weighing machines. In Galatz, as also in Braila, will be erected a steam engine of 500-horse power for driving the machinery inside the elevators. The grain will be taken out of the ships by means of the so-called "Telescope" elevators, which are suspended on cranes capable of lateral and vertical motion, and can, consequently, be lowered into the ship. These appliances are of quite recent model, and seem destined to completely supersede the older ship elevators. Each of the elevators is provided with its own motor, and can lift 150 tons of grain in the hour. Beside the granaries (known in Germany as "silospeicher") will be erected warehouses for other kinds of goods, and these will likewise be fitted with the best and most complete plant of modern machinery. The Roumanian Government has allocated a sum of seventeen and a half million francs (£700,000 sterling), for the realization of this great undertaking. The Braila elevators are to be ready for work at the beginning of 1889, and those at Galatz in the August of the same year. The works will be under the supreme direction of Mr. Cantacuzino, Director-General of the Railways of Roumania, but the details of this gigantic enterprise have been worked out by M. Sallgny, the chief engineer of the railways, who, in the engineering portion of his task, will have the assistance of M. Schlawe. The erection of the buildings at Braila will be under the special supervision of M. Tasca, the district engineer, and a similar duty will fall to the lot of M. Danielopulo, who holds the same office at Galatz. The whole plant of machinery and mechanical fittings for these warehouses will be supplied by the well-known firm of G. Luther of Brunswick, Germany, who has erected some of the largest granaries in Europe, and who has made a specialty of the "Telescope" elevators in question.—*The Miller, London, Eng.*

ELEVATOR AND GRAIN NEWS

Evard & Grecht will build a brewery at Utica, N. Y.
A cotton-seed oil mill is projected at Washington, Ga.
John D. Fred will erect a feed mill at Griswoldville, Ga.

L. E. Francis will erect a broom factory at Richmond, Ky.

Frank Bros. are to build a grain elevator at Le Grand, Ore.

Fred W. Nance, grain dealer, Denver, Colo., has sold out.

Another grain elevator is being erected at Broken Bow, Neb.

The elevator capacity of Vinton, Iowa, is about 200,000 bushels.

Berley, Schnerder & Co. will erect a brewery at Louisville, Ky.

T. C. Canmissar will erect a broom factory at Louisville, Ky.

The Eclipse Corn Mill Co. of Plano, Tex., will erect a warehouse.

Messrs. Howe & Archer will erect a grain elevator at Volga, Dak.

Weldon & Clement have established a broom factory at Marion, Ky.

C. V. Jacobs has discontinued his grain business at Cresco, Iowa.

Scott & Singley, brewers, Wardner, Idaho, have dissolved partnership.

The Northwestern R. R. Co. will erect a grain elevator at David City, Neb.

The W. P. Orr Linsced Oil Co. succeeds Orr & Leonard, at Piqua, Ohio.

The Bergner & Engel Brewing Co., Washington, D. C., will erect a building.

The Buffalo Co-operative Company of Buffalo, N. Y., will build a brewery.

The Plymouth Roller Mill Co. of Le Mars, Iowa, will build a grain elevator.

H. Russell, grain dealer, Ferguson, Iowa, has removed to Liscomb, that state.

The broom corn crop in Central Illinois this year will be the largest on record.

R. R. Warner of Henry, Ill., is building a grain elevator at Peru, that state.

Otto Giesson, brewer, Canton, Ohio, has sold out to the Canton Brewing Company.

Emerson, Eddy & Co., grain dealers, Boston, Mass., have dissolved partnership.

Gardner, Eaton & Co., grain dealers, Palatka, Fla., have dissolved partnership.

J. C. Hubinger is interested in a starch factory to be established at Keokuk, Iowa.

The Farmers' Alliance Company at Watertown, Dak., has commenced to buy wheat.

The Central Iowa Mill and Elevator Company at Winterset, Iowa, has sold out.

A grain firm has contracted to put up an elevator at the new town of Prairie View, Ill.

James C. Whitaker & Co., grain and flour dealers, Boston, Mass., have suspended.

L. S. Blood of St. Paul, Minn., will establish a broom factory at St. Cloud, that state.

Mark & Worcester are successors to Mark & Carey in the grain business at Clio, Mich.

Probasco's elevator at Towanda, Ill., is now running and doing a satisfactory business.

The North Dakota Elevator Company has filed a voluntary application for dissolution.

The People's Brewing Company of New Orleans, La., have purchased a site for a brewery.

Rawls & Perry, Cuthbert, Ga., will shortly purchase machinery for a cotton-seed oil mill.

Messrs. Mann & Lehart of Minneapolis, Minn., will erect a grain elevator at Hope, Dak.

There are 160,000 bushels of wheat stored in the two warehouses at McMinnville, Oregon.

A grain elevator would be a paying investment at Horton, Kan., so a local paper states.

St. John & Danforth are successors to St. John & Co. in the grain business at Blencoe, Iowa.

T. W. Angell has withdrawn from the grain firm of Angell & Barney of Providence, R. I.

P. C. Howell & Co., Newark, Dak., are placing steam power and machinery in their elevator.

Fred Muller, brewer, Milwaukee, Wis., will erect a large brick warehouse at Detroit, Mich.

Brooks Bros. of Grand Forks, Dak., are building two new grain elevators on the Northern Pacific extension,

one at Kelly's Siding and one at Turtle River, each having a capacity of 50,000 bushels.

The American Glucose Company at Leavenworth, Kan., consumes daily 6,000 bushels of corn.

The Florence Mill Co. of Bathgate, Dak., will build a large grain elevator at that place this month.

A \$10,000 brewery is to be built at Chattanooga, Tenn., at an early date. Walter Lauter is interested.

F. H. Hahn, grain and stock dealer, Schaller, Iowa, has disposed of his grain business to F. G. Butler.

The Robson & Stegman Distilling Co. has been incorporated at Newport, Ky. Capital stock \$75,000.

John A. Beyer, wholesale dealer in grain and flour at Newark, N. J., is succeeded by John A. Beyer & Co.

M. Killion & Co. of Downs, Ill., have recently put a mill for grinding corn and feed in their grain elevator.

The Southern Cotton Oil Company, a competitor of the Oil Trust, has just finished a \$200,000 mill at Houston, Tex.

The Adams Manufacturing Company of Natchez, Miss., have added new machinery to their cotton-seed oil mill.

L. B. Townsend of Ionia, Mich., has staked off a site for a grain elevator in the new town of Sunfield, that state.

Mr. George Davis has removed from Mackinaw, Ill., to Bradley, this state, where he will buy grain for Miller Bros.

The Ottumwa, Iowa, starch mill, after being remodeled, has begun operations again, employing seventy-five hands.

The Cleveland Milling Co., of Cleveland, Ohio, are erecting a grain elevator to have a capacity of 125,000 bushels.

The Klausmann Brewing Company, St. Louis, Mo., will make improvements to their brewery at a cost of \$50,000.

The Eleventh Street Elevator Co. of Dubuque, Iowa, has filed articles of incorporation. It has a capital stock of \$5,000.

The Southwestern Broom Manufacturing Co., with a capital stock of \$6,000, has been incorporated at Evansville, Ind.

Duncan D. Garcelon, a shipper of grain and millstuffs at Chicago, Ill., and a member of the Board of Trade, has failed.

George W. Titlow, a grain dealer of Baltimore, Md., has suspended. He is quoted as "long" on 240,000 bushels of wheat.

The G. A. Wise Brewing Co. of Chicago are erecting a \$2,000 elevator. Baumann & Lotz are the architects for the new building.

The Coffeen Mill and Elevator Co. at Homer, Ill., has bought Giles McGee's corn cribs and scales at Deer Station, this state.

The new Grand Trunk elevator at Port Huron, Mich., opened for business Sept. 19. It has a capacity for 500,000 bushels of grain.

It is reported that R. Portner of Alexandria, Va., contemplates erecting a \$300,000 brewery at Washington, D. C., the coming year.

J. L. Goodbar of Lonoke, Ark., in company with others, will form an organization to erect a large corn mill at Little Rock, that state.

G. N. Todd of Mattoon, Ill., has leased the old Money-penny Elevator at that place, and will use it for a broom-corn storage warehouse.

W. D. Pittman of Enfield, N. C., contemplates purchasing the mill of J. H. Whitaker and adding machinery for manufacturing meal.

The Union Elevator Co. at Omaha, Neb., is putting in a ten-inch sewer from their elevator, running it into Spoon Lake, a distance of 900 feet.

John F. Pfeiffer, distiller, Mount Jackson, Ind., has incorporated under the style of the Eagle Mills Distillery Co., with a capital of \$59,000.

The C. I., St. L. & C. R. R. Co. are putting side tracks to the mills and breweries at Aurora, Ind., to further their shipping facilities.

The Northern Pacific Elevator Company has built thirteen new elevators in Dakota this year having an average capacity of 40,000 bushels.

A large grain elevator for distributing winter cereal supplies to the farmers of Emmet county, Mich., is projected at Harbor Point, that state.

The John S. Miller Distilling Co. of Sterling, Ill., has been incorporated with a capital stock of \$10,000. John S. Miller and others incorporators.

A large force of men is repairing and rebuilding the walls of the Prinz & Ulrich Malthouse at Peoria, Ill., that were damaged by the storm Oct. 3.

It took 125 empty cars one day recently to meet the demands of the grain men of Audubon county, Iowa. Thus the great crop is kept moving.

The three elevators being built by the Duluth Elevator Co. at Superior, Wis., are about completed. Their combined capacity will be 6,000,000 bushels.

The Canadian Manufacturer says that a Winnipeg, Man., merchant has received inquiries from a large brewing concern in England, which wants a million bushels of Canadian barley. And further questions that as there is no

duty on barley entering England, and one English brewer alone wants a million bushels of it, why shouldn't Canada send its barley to the English market?

A grain elevator with a capacity of from 500,000 to 1,000,000 bushels is contemplated at Dallas, Tex. Frank M. Cockrell is interested in the project.

The Northern Pacific Railroad Company has handled so far this year 11,744,566 bushels of wheat, an increase of 500,000 bushels over the season of 1886.

Carruthers & Co., commission merchants, New York City, have filed schedules in assignment showing liabilities of \$93,943, and actual assets of \$12,750.

The Pleasant Valley Distilling Company of Milwaukee, Wis., has been incorporated with a capital stock of \$50,000. Incorporators, John W. O'Neil and others.

The Excelsior Beverage Preserving Company has been incorporated at San Francisco, Cal. Capital stock \$50,000. Incorporators, Pierre G. Samps and others.

The Enterprise Brewing Co. of Philadelphia, Pa., has made an assignment, confessing liabilities to the amount of \$203,000. Their assets are placed at \$350,000.

The Manitoba Railway Company will shortly begin the erection of two new elevators at West Superior, Wis., to be operated in connection with the Great Northern.

Graddy & Son of Versailles, Ky., are building an elevator with a capacity of from 90,000 to 100,000 bushels of grain. When completed it will have cost \$10,000.

C. W. Seefield is doing a big business in Western grain at St. Charles, Minn. One day recently he had thirty-four cars loaded with grain at St. Charles and Utica.

The Crystal Spring Brewing Company has been incorporated at Syracuse, N. Y. The capital stock is \$100,000. Charles Simon and others are the incorporators.

Mr. Wood of the grain firm of Weaver & Wood at Colfax, Ill., has completed his new elevator. An engine has been attached for shelling corn and elevating grain.

The Canton Incorporated Distillery Company has been incorporated at Canton, Ohio, with a capital stock of \$50,000. Incorporators, John G. Hornstein and others.

Application has been made to force William Dressbach and John Rosenfeld, of "wheat-corn" fame, into insolvency. Both men are residents of San Francisco, Cal.

The Windisch-Muhlhauser Brewing Company of Cincinnati, Ohio, will erect a new building. It will be built of brick and stone, 189x153 feet, and will cost \$300,000.

George Gunther of Baltimore, Md., has just completed a large addition to his brewery at Canton, near that city, at a cost of \$50,000. It is 42x72 feet, and five stories in height.

The grain and stock commission firm of J. T. Lester & Co., at Chicago, Ill., has dissolved partnership. John T. Lester will continue the business under the style of the old firm.

The Crescent Brewing Co. of Aurora, Ind., contemplates establishing a brewery at Indianapolis, that state. A suitable site is being looked up by an agent of the company.

A broom factory with a capacity of fifty or seventy-five dozen brooms per week is soon to be established at Eufaula, Ala. Mr. E. B. Young is at the head of the enterprise.

Messrs. Todd & Heap have purchased the Mulvey Brewery at Fort Rouge, Winnipeg, Man., and are overhauling the property. They will put in a full line of new machinery.

The Waverley Mill and Elevator Company has been incorporated at Chicago, with a capital stock of \$175,000. The incorporators are Ulrick King, Robert Thies and Daniel Butler.

Mahan & Wilson of Brainerd, Minn., have the machinery for their new feed mill in place. It will be on the site of their roller mill, which was removed to Duluth some time ago.

D. H. Buttz, Buttzville, Dak., is putting in his elevator a 20-H. P. engine and boiler; also a Howes & Ewell Warehouse and Elevator Separator, and a Paige Double Gear Horse Power.

Parties interested in Puget Sound shipping have announced their intention of establishing a dry dock company at Port Townsend, Wash. Ter. The company will have a capital of \$50,000.

The St. Anthony Elevator Co. will erect a 1,500,000-bushel storage elevator at Minneapolis, Minn. The cost will be \$200,000. The plans are in the hands of Architect J. A. McLennan of Chicago, Ill.

Architect J. A. McLennan of Chicago, Ill., has the plans prepared for a large elevator for the Santa Fe Elevator Co., to be built in Chicago. The capacity is to be 1,500,000 bushels, and it will cost \$350,000.

Wm. F. Smalley of Wilmington, Del., has purchased the Harmony Mill property in White Clay Creek Hundred. Among other improvements, he is erecting a large warehouse for the sale and storage of grain.

A suit to recover \$31,786.25 has been entered in the Federal Court at Louisville, Ky., by John G. Gist of Ohio, against Hodgen & Miller, grain and commission merchants of that city, who also have a branch at Covington, Ky. The plaintiff alleges that the defendants, carry on a bucket shop at the latter place, and that he lost \$31,786.25 to them on wagering contracts. He claims that the contracts were not bona fide business transactions, but gambling, and asks the court to compel Hodgen & Miller to return to him the money. Last fall a similar

case in the same court was decided in favor of the plaintiff.

McCulloch & Co. are erecting a grain elevator in connection with their mill at Rapid City, Man.

The Houston Corn Mill Co. of Houston, Texas, with a capital stock of \$1,000, has been chartered.

The new Coatsworth elevator, at Buffalo, N. Y., is being enlarged, and when the improvements are completed it will have a capacity of 1,250,000 bushels.

Elevator men at Chatfield, Minn., are complaining of a want of cars. On the 5th inst. six cars of grain were awaiting transportation at one warehouse, and several more at another.

Whitmore Bros., millers, Montevideo, Minn., are putting up a 25,000-bushel elevator in connection with their mill, to be completed by Dec. 1. F. C. Willsey of Aberdeen, Dak., has the contract.

Prof. N. H. Pratt of Atlanta, Ga., has contracted for machinery for a new process cotton-seed oil mill. He uses a solvent and pressure simultaneously for extracting oil from cotton seed.—*Manufacturers' Record*.

J. B. Wathen & Bro., distillers at Louisville, Ky., have made an assignment. The liabilities are placed at \$90,000. The assets, including the plant, which is one of the most costly of its kind in the state, are \$125,000.

John J. Love, formerly the dock superintendent and bookkeeper of the Delaware & Hudson Canal Company of Chicago, has been sentenced to two and a half years in the penitentiary for embezzling \$10,000 from that company.

Mr. Thomas Tweet of Eagle Bend, Minn., has been appointed assistant weigher of grain at Duluth. The appointment of an assistant was necessitated by the rapidly increasing work of the office since the last wheat harvest.

A Toledo, Ohio, firm bought 250,000 bushels of corn and cribbed it at Hammond, Ill., two years ago. They held it until a few days ago for higher prices. It is now sold and being shipped. Its transportation requires nearly 600 cars.

It is said that the wheat crop along the line of the Northern Pacific road in Dakota is very light, but what there is of it will be all good milling wheat. The crop in the Northern portion of the Red River valley is immense and of good quality.

The Canadian Pacific Railway Company will erect a large elevator at Owen Sound, Ont., to have a capacity of 1,350,000 bushels of grain. The elevator will be equipped with the best machinery. It will be completed in time for the spring trade.

Mr. Walter Miller, formerly of Bismarck, Dak., and for several years past bookkeeper for the Russell-Miller Milling Co. of Valley City, Dak., has recently taken charge of a line of elevators belonging to his father in Southern Minnesota.

The grain blockade has reached Manitoba, and their surplus for export is so much greater than last year that there seems to be no prospect for relief. All the grain warehouses are full, and grain has depreciated in value several cents per bushel.

A twine factory is wanted and very much needed in Manitoba. Local capitalists have figured out the cost and profit, and say that twine can be manufactured in Manitoba and sold at two-thirds the price it is now sold at and still leave a large profit.

A railroad is to be built from Devil's Lake, Dak., to a junction with the Northern Pacific at Hawley, Minn., by the Minnesota & Dakota Company to furnish another direct outlet to Duluth from the wheat lands. Work will begin on the new road at once.

The Farmers' Mutual Elevator Co. are placing steam power in their new elevators at Ulen and Winnipeg Junction, Minn. The engines and machinery are manufactured by the Paige Mfg. Co. of Ohio, and furnished by G. W. Crane of Minneapolis, Minn.

The Farmer State Alliance of Texas has its headquarters and locate its Cotton, Grain and Produce Exchange at Dallas, that state. The city gave them a bonus of \$10,000 and a block of land, on which they will erect a building to cost not less than \$20,000.

The Northwestern Elevator Co. are completing their twentieth elevator this season, using the Paige Horse Power, the entire machinery being furnished by G. W. Crane of Minneapolis, Minn. This is the largest single order placed by any of the elevator companies this season.

The wheat crop reports from Oregon, Washington Ter. and Idaho are very encouraging. Eastern Oregon and Western Idaho have a larger crop than ever before, forty bushels to the acre being the average in those regions, and from one piece of twelve acres a yield of seventy-five and one-third bushels was garnered.

George Postberg of Afton, Minn., lately arrested on a charge of forging a grain ticket on Smith & Thompson of Hastings, that state, is free, the action against him having been dismissed on motion of the county attorney. The defendant, to indemnify the elevator firm from all possible loss, gave a bond of \$50.

The *Montreal Herald* takes a sanguine view of the grain blockade in Manitoba. It says that there is no cause for alarm in regard to freight difficulties. The wheat will not all have to be carried by rail to Montreal, as there are yet six weeks of open navigation and the distance from Manitoba to Port Arthur is short. There is elevator accommodation there for two million bushels, besides the million and a half capacity along the line.

The *Herald* condole with the pessimists who have prophesied the "dead lock" and tells them to take heart and the great crop will move along comfortably enough.

The Minneapolis Elevator Company, which operates elevators A 1 and 2, has adopted a new plan with this year's crop. Instead of depending on the wheat which naturally came to it for storage purposes, they will hereafter buy wheat on their own account, and thus secure the revenue from the continuous storage of grain.

A local paper says that nearly twice as much grain has been shipped from Norfolk, Va., since the construction of the Norfolk and Western Grain Elevator than from Newport News, that state, during the same period. Twelve steamships laden with grain have been sent by the company to foreign ports since they started up the new elevator some time ago.

The old and well known grain and stock commission firm of J. T. Lester & Co., Chicago, Ill., was recently dissolved by mutual consent. Mr. Lester will continue the business for some time alone. The retiring partners are Edward W. Bangs, Roswell A. Peters and Samuel W. Alleton, special. It is Mr. Lester's determination to retire from business altogether before very long, owing to his failing health.

On Sept. 27 the St. Anthony Elevator Co. of Minneapolis, Minn., took out a permit for their new elevator on the site of the one recently destroyed by fire. The new structure will be 100 feet in height and will cover a ground area of 70x448 feet. It will be constructed of timbers, covered with sheet iron, and will be the largest building of the kind in the Northwest. The estimated cost is \$151,000.

Wheat has been pouring into Groton, Dak., for several weeks past at the rate of 6,500 bushels per day. Wolcott & Co. of Duluth, who recently built a grain warehouse at that point, created some excitement there on the 1st inst. by paying 62 cents for No. 1 hard wheat and 56 cents for No. 3 Northern. Wheat that had been graded as No. 2 Northern passed as No. 1 hard, which difference in grading made it as good as a 13 cents raise.

A prominent grain shipper of Washington Territory gives it as his opinion that the most practicable outlet for that territory's surplus grain is by rail, connecting the Port Townsend Southern Railroad with Port Townsend Bay. He says that seven-tenths of the vessels coming to Puget Sound sail as far as Port Townsend Bay, while seven-tenths of these going to points further inland have to employ tugs. Transportation by rail would be much cheaper and more rapid.

Mr. A. B. Robbins, president of the Northwestern Grain Dealers' Association, says farmers in Minnesota have not begun to move their crops yet. In Dakota the movement which was checked early in the season because the elevator companies refused to take damp grain, is starting up again and farmers are selling freely. There is plenty of wheat to come, and if the weather holds good during October, receipts at Minneapolis and at Duluth will doubtless be very large.

An investigation of the charges brought against the Ontario Seed and Grain Company, was begun in London, Ontario, Oct. 5. The company is alleged to have defrauded a number of farmers by selling them seed wheat at \$15 per bushel, agreeing to buy back double the quantity they sold, for which they would pay \$10 a bushel. It was claimed that a number of farmers gave their notes for wheat which they never got, the company having dissolved perforce before the grain was delivered, while the notes had been negotiated by outside parties.

There has been a grain blockade in Milwaukee, and the railroad companies notified their agents not to receive any more grain for Milwaukee unless it was to go into the elevators. The Northwestern Road had 700 cars of grain on track in Milwaukee, and 1,000 cars more on the way from the West to that point. While it is a common thing to have trouble of this kind in the fall, the blockade this year is unprecedented. The effect of these notices by the railroads was to divert the grain trade to Chicago or to force the grain into elevators at Milwaukee. Insufficient terminal facilities are the cause of the trouble, and the railroads are said to be wholly to blame.

The Winnipeg Board of Trade publishes the report of its secretary on the year's crop. The net result for export is given as follows: Wheat, 10,000,000 bushels; barley, 1,000,000 bushels; oats, 2,500,000 bushels; flax, 150,000 bushels. This is after allowing 2,000,000 bushels of wheat for home consumption, seed, etc., 1,000,000 bushels of barley and 2,500,000 bushels of oats. The wheat crop is estimated at thirty bushels to the acre on an average, and this is thought to be a correct showing. There is elevator capacity in the province for about 1,600,000 bushels, and according to the official computation of the yield there is over 14,000,000 bushels to be moved, which will require 20,000 railway cars.

An interesting lawsuit is in progress between J. C. Palmer, a wealthy farmer of Washington, Ind., and the Evansville & Indianapolis Railroad. The road is built along the line of the old Wabash & Erie Canal, abandoned by the trustees twenty-five years ago. When it was abandoned the land reverted to the former owners. Notwithstanding this, and the fact that twenty years' possession gives a valid title, the canal trustees sold the property, rights and franchises to Mackey of Evansville, and he sold to the railroad company. When the road came to be built, however, the farmers refused to allow the line to cross their farms, but the company used force and completed the road. In 1885 Palmer got a temporary injunction, which was made perpetual in 1886, and under it he is arresting the train hands from day to day as they try

to run trains across his land, and seems to be in a fair way to stop the operation of the road. He now has a number of conductors, engineers and brakemen under bonds.

J. H. Vannerson & Co. of Augusta, Ga., have leased the Georgia Railroad Grain Elevator, remodeled it and made it a commodious warehouse in connection with their elevator, where they do an extensive business. Their elevator building is situated on the track of the Georgia Railroad and is 150x125 feet in dimensions. It is conveniently arranged so that cars can be unloaded under shelter, and not interfered with by the elements. In addition to their elevator are sixty-five bins (thirty-five of which are wagon bins), in which bulk grain is elevated to the top floor for storage. The elevator is one of the best equipped in the South and has every facility for drying damp or damaged grain. The storehouse is divided in two for storerooms—two on the lower, with high ceilings. Drays can drive right into the warehouse to load or can load from three different sides.

The New Orleans *Times-Democrat* says of the grain business of that city: The receipts of wheat this season have largely increased, while those of bulk and sacked corn are approximately about the same, as are those of oats and bran. That it is more profitable to ship flour than wheat goes without saying, therefore it is a matter for special congratulation that our local exports of flour have materially increased. The receipts of breadstuffs during the past season were as follows: Flour, 654,000 barrels, against 552,581 last year; 4,891,345 bushels of wheat, against 530,408 last year; 8,065,697 bushels bulk corn, against 8,118,906; corn in sacks 495,658, against 552,098; oats 580,395 sacks, against 639,811; bran 124,363 sacks, against 128,285. Exports of flour were 52,984 barrels, valued at \$238,812, against 27,183 barrels in 1885-'86. Wheat exports were 4,621 bushels, and corn 8,003,353 bushels. Elevator No. 3 of the Duluth Elevator Company received its first wheat Oct. 1.

The following is a list of the boiler sales of the Babcock & Wilcox Co., of New York City, for the months of July and August. This list was published last month, but through the unpardonable blunder of the proof reader "pound" was substituted for "horse power" throughout: The Electric Club, New York City, 75-horse power; Eagle Knitting Company, Elkhart, Ind. (second order), 50-horse power; Old Kentucky Woolen Mills, Louisville, Ky. (second order), 104-horse power; A. Hayward, San Mateo, Cal., 51-horse power; Lehigh Coal and Navigation Co., Philadelphia, Pa. (third order), 208-horse power; Sibley Mills, Baltimore, Md. (second order), 125-horse power; Pacific Power Co., San Francisco, Cal., 208-horse power; New York Steam Co., New York City (fourteenth order), 400-horse power; New York Steam Co., New York City (fifteenth order), 250 horse power; Edison Electric Mfg. Co., of New York City (thirty-fifth order), for three new stations, 8,700-horse power; Chicago, Burlington & Quincy R. R. Co., Chicago (second order), 136-horse power; St. Louis Refrigerator and Wooden Cutter Co. (second order), 240-horse power; Chickies Iron Co., Chickies, Pa., 240 horse power; Randleman Mfg. Co., Randleman, N. C., 51-horse power; D. R. Campbell, Sangerville, Me., 122-horse power; Inter-State Consolidated Rapid Transit Railway Co., Kansas City, Mo., 400-horse power; People's Cable Railway, Kansas City, Mo., 600-horse power; Troy Iron and Steel Co., Troy, N. Y. (second order), 460-horse power; Market Street Cable Railway Co., San Francisco, Cal. (second order), 500-horse power; T. A. Edison, for his new laboratory, Orange, N. Y., 219-horse power; New York Steam Co., New York City (sixteenth order), 250-horse power, making a total of 13,387 horse power.

The *Market Record* publishes the following estimate of wheat now held in the various elevators: The amount of wheat now in store in elevators and warehouses in Minnesota and Dakota, outside of Minneapolis, St. Paul and Duluth is 10,829,000 bushels, allowing that it is 500,000 more than on Oct. 1. On that date the amount was 10,329,000 bushels, distributed along the several lines of railroads. There were on the lines of the Manitoba 4,820,000 bushels, on the Chicago & Northwestern 890,000 bushels, Omaha 275,000 bushels, Minneapolis & Pacific 88,000 bushels, along the several lines of the Milwaukee & St. Paul 1,541,000 bushels, Northern Pacific 2,179,000 bushels, Minneapolis & St. Louis 351,000 bushels, St. Paul & Duluth 60,000 bushels, Minnesota & Northwestern 20,000 bushels, and along the Red river 105,000 bushels, making a total as stated. On Oct. 28 last year the amount in store along the same lines was 21,746,000 bushels, distributed as follows: Manitoba lines, 8,069,000 bushels, Minneapolis & St. Louis 1,563,000 bushels, Omaha 271,000 bushels, Chicago & Northwestern 3,348,000 bushels, Chicago, Milwaukee & St. Paul 4,570,000 bushels, Northern Pacific 3,443,000 bushels, Minnesota & Northwestern 120,000 bushels, St. Paul & Duluth 75,000 bushels, Red River 87,000 bushels. The stocks in store Oct. 1 in Minneapolis, St. Paul and Duluth were 3,190,937 bushels, against 11,207,324 bushels last year on Oct. 23. The total stocks in store in Minnesota and Dakota on Oct. 1, including both country and city, were 13,519,937 bushels, against 32,953,324 bushels on Oct. 28 a year ago. A glance at the figures shows that the entire elevator system contains but 40 per cent. of the wheat held by it less than a month later one year ago. Last year's crop was so much above ordinary calculations that people had determined not to put the present too low. The official estimates intimate that the total is some 10,000,000 bushels more than last year. That calculation is undoubtedly at fault. The final outcome of the crop of a year ago resulted in bringing out not less than 100,000,000 bushels from Minnesota and Dakota. That amount will not be reached, perhaps, by some 20,000,000 bushels this crop.

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HARLEY B. MITCHELL, - - - Editor.

ADVERTISING.

This paper has a large circulation among the elevator men and grain dealers of the country, and is the best medium in the United States for reaching this trade. Advertising rates made known upon application.

CORRESPONDENCE.

We solicit correspondence upon all topics of interest connected with the handling of grain or cognate subjects.

CHICAGO, ILL., OCTOBER 15, 1887.

EXPORTS OF BREADSTUFFS.

The report of the Bureau of Statistics at Washington, issued Oct. 10, for the month of September, 1887, shows a decrease in corn, oats, barley and wheat as compared with the same month for the previous year. The total value of the breadstuffs exported during September, 1887, was \$11,094,132, against \$14,284,958 for September, 1886. The value of the exports for the nine months ending Sept. 30 was \$129,892,624, against \$110,832,029 for the nine months ending Sept. 30, 1886.

The exports of corn for the month ended Sept. 30, 1887, were 1,873,721 bushels, against 2,713,118 bushels for the same time last year. There were 53,068 bushels of oats exported during September, 1887, against 119,030 bushels in September, 1886. The amount of wheat exported during the months named was 5,732,873 bushels for September, 1887, against 10,574,936 bushels for 1886. Rye stands at 474 bushels for September, 1887, against 16,493 bushels for September, 1886.

"CHICAGO'S DECADENCE."

A number of the Eastern commercial publications, who do not as a rule cherish any special love for Chicago, have been amusing themselves for some time past in predicting a downfall from its present high position as a grain market. They speak in mournful and seemingly sympathetic terms of the gradual decrease in the grain trade, and if one were to take their statements as facts, the erection of new elevators and enlargement of old ones, as constantly going on, would seem the veriest folly. In the face of such prognostications, the *Daily Trade Bulletin* publishes a few figures which are stubborn things to get over. In the ten weeks previous to its last issue there was received in the Chicago market 1,203,209 barrels flour, 3,026,608 bushels wheat, 14,980,660 bushels corn, 12,849,435 bushels oats, 203,432 bushels rye, and 3,345,687 bushels barley, or an aggregate (reducing flour to wheat) of 39,820,026 bushels, or a weekly average of 3,982,026 bushels. During the same time there were shipped 1,211,443 barrels of flour, 6,854,092 bushels wheat, 14,041,300 bushels corn, 9,567,808 bushels oats, 129,836 bushels rye, and 1,408,806 bushels barley, or an aggregate (reducing flour to wheat) of 37,453,335 bushels, or an average of 3,745,333 bushels. Under the disadvantages of the present season, the drought, short crops, etc., the above is not a bad showing for a declining grain mar-

ket. The Eastern papers are but wasting time and printers' ink in endeavoring to foresee a decadence in any branch of business in the great metropolis of the West.

THE RIVER IMPROVEMENT CONVENTION AT PEORIA.

The Western states whose proximity to the waterways under consideration has given them a practical interest in the subject, were well represented at the convention held at Peoria on Oct. 11. Delegates were present from Iowa, Missouri, Illinois, Oregon, Maryland, Tennessee and California, numbering in all 600. Senator Shelby M. Cullom of Illinois, was elected permanent chairman, with a long list of vice-presidents and secretaries. Gov. Oglesby presided at the opening session, and made an excellent address. Senator Cullom also delivered a speech full of good points. Other prominent men spoke at various times during the sessions, and all expressed themselves as heartily in favor of the proposed project of an unobstructed route from the Gulf of Mexico to the lakes, as a business, sanitary and protective measure. The friends of the Hennepin Canal pressed their claims upon the convention, and the Chicago people were not backward in expressing their need of the outlet for their sewage.

Independently of all local or sectional interests, however, the matter is one of vital importance to the Western country, and it is to be hoped that the interest newly awakened will not be allowed to subside without producing practical results.

UNRELIABLE CROP REPORTS.

Much complaint is made in regard to the unreliability of the government crop reports. While they should be the most accurate and best substantiated of all statistics issued by the department at Washington, it is notorious that for business purposes they cannot be depended upon. It has been hinted that they are manipulated at headquarters in order to serve certain interests, but while we would hesitate to lay this charge at the doors of the official concerned, it is certain that some method should be adopted which will render these reports not merely a form, but a source of information which will prove of real value to the agricultural interests of the country. In too many cases under the present management they are collected from unreliable persons who give the results of their opinion, and not their practical knowledge. The agents appointed by the Agricultural Department are responsible for their share of the work, but they are obliged to intrust much of it to irresponsible parties, and it is impossible to know whether the information collected is correct or not. It would seem that in such an important matter which so closely affects the business interests of the country, it would be better for the government to pay liberal salaries to men who should make it their personal duty to investigate and report on crop returns throughout the entire country, and do the work so thoroughly and efficiently that the merchant and manufacturer can predicate their operations with a reasonable certainty, on the reports returned.

Members of the Chicago Board of Trade, however, do not hesitate to lay the blame for much of the inaccuracy in the reports on the Commissioner of Agriculture, Mr. Dodge, who, they say, makes a prediction in regard to the crops, and then fixes up the figures to suit the prediction. For instance, he reports the entire crop of the present season in the Northwest to be nearly equal to that of last year, when it is well known that such is not the case. His figures are stated by men well posted on the facts to be from 25,000,000 to 30,000,000 bushels too high, while some even insist that from 50,000,000 to 60,000,000 is nearer the actual discrepancy. For the past two years his figures have been much less than the actual amount, while this year they far exceed it.

The figures on the corn crop are about as unreliable, for the loss this year by drought, which also compelled the cutting of green corn for feed has been very great, and while Mr. Dodge has allowed only the small margin of 2,000,000 acres,

competent judges declare that 6,000,000 acres would be none too large an allowance in this year's report.

This exaggeration in the estimates of grain crops is bound to be an expensive error for Western producers. It makes a wrong impression on foreign buyers, and either reduces the prices or prevents sales. It is a matter that the government should closely investigate as affecting the most important interests of the country. If the crop reports are to be of any service either to producer or buyer, they must be as accurate as actual investigation and information can make them, and predicated on facts, not in the personal opinion or imagination of any one man. While it may be true that "figures will not lie" if left to themselves, they are easily manipulated and can be made to tell most prodigious untruths in the most seemingly authentic manner. A little troubling of the waters in official circles in any department generally results in good to somebody, and this particular Agricultural Department will be all the better if the farmers and grain men look a little more closely into its workings, instead of being content with the printed estimates of their work during the year.

GRAIN INSPECTION AT MINNEAPOLIS AND DULUTH.

The growing jealousy between the grain men at Minneapolis and Duluth, has again cropped out in a complaint laid before the Railroad and Warehouse Commission by the former, that wheat at Duluth was, in violation of the rules prescribed by the Commission, graded differently from that at Minneapolis, and that the inspection was also conducted in a very careless and unsatisfactory manner. Wheat which grades No. 1 at Duluth is rated at only No. 1 Northern at Minneapolis, and the great laxity in regard to grading at the former place was said to be notorious. The commission was asked to make Duluth grading more rigid. Chief Inspector James of Duluth says to change the grading there at present would result in disaster to the whole trade generally. He says he employs the best inspectors attainable, and he is convinced the complaints are caused by the sharp competition between the two points. The Duluth Board of Trade adopted resolutions resenting the interference of interested rivals with matters which were none of their concern, and maintaining that the present inspection at that place is such as to inspire confidence in their grades, and that sound policy requires no change to be made in the present standards or existing methods. There is much indignation among the grain men of Duluth at the action of the Minneapolis men, the reason for which is said to be entirely owing to the fact that as Duluth prices are higher than Minneapolis prices, the wheat from competing points naturally goes to the former city.

WE had a short call recently from Mr. S. E. Worrell, the well-known manufacturer of drying machines, who informed us that he is very busy building one of the largest driers in the United States. This is a special machine contracted for by the Millington White Sand Co. of Chicago, to be set up at their extensive sand quarry at Millington, Ill. This drier will require about 20,000 pounds of iron and steel, mostly the latter on account of the cutting action of the sand, and will have a drying capacity of about 100 tons of sand per day. The drying is made necessary from the fact that these parties are washing the impurities out of the sand so that it is in better condition for melting into glass, for which purpose it is almost exclusively used. The proprietors of this bank of sand are putting in an extensive plant for increasing the quantity and improving the quality of their product. In connection with their drier they have already commenced building a sand elevator, copied somewhat after our grain houses, to have a storage capacity of 1,500 tons of sand. Mr. Worrell promises in the near future to give us a more detailed account of this novel elevator and the interesting method of mining and handling their valuable sand, which is already being shipped to distant parts of this country, some of it going in carloads to Nova Scotia.

Editorial Mention.

ERIE Canal freights are $4\frac{1}{2}$ cents for wheat, and 4 cents for corn from Buffalo to New York.

BRAZILIAN corn is a new variety for which great things are promised, both as to yield and as to its quantity of fodder.

SPECULATIVE business was never so dull as it is at present. The doctors have different reasons for the present state of affairs, but all are agreed that business was never so dull.

MINNEAPOLIS looks at Duluth, murmurs "dock-age for dirt," and smiles. Duluth smiles back sarcastically, and murmurs "stealage," and now the two are not on speaking terms.

It was supposed that Duluth would get some of Manitoba's wheat crop this year. The Canadian Pacific Road, however, does not intend to let the grain come this way, and it is master of the situation.

THE Erie Canal boatmen claim that during their recent "strike" for 5 cents a bushel, the bulletin of the Buffalo Board of Trade gave the receipts of the week as 100,000 bushels of corn, when the actual receipts were 3,000,000 bushels.

SINCE the failure of Dresbach and Rosenfeld at San Francisco it is a question who will take their places as exporters of wheat. A year ago there were a great many more vessels under engagement than there are at present. Dresbach was the leader in the export trade.

MESSRS. GEO. B. CARPENTER & Co., 202 to 208 South Water St., Chicago, have placed us under obligations for a copy of their "List No. 9," referring to their stock of belting, hose, packing and general mill supplies. They have added to their line a full stock of heavy rubber goods, and are now prepared to supply the trade. Readers should write them for their "List No. 9," which will be sent on application.

It is reported that the Buffalo elevators are about to make a decided reduction in their rates of storage where the grain is allowed to remain over thirty days. Parties placing grain in the elevators will be obliged to state how long they intend to leave it there. The very general complaint in regard to the high charges at this point has had a salutary effect it seems, and other elevators will have to fall in line.

A MISSISSIPPI River Improvement Convention was held at Quincy, Ill., Oct. 13, the object being to consider the improvement of the river between the Des Moines Rapids and the mouth of the Illinois River. A large representation of business men, legislators, members of Congress, steamboat men, city officials and others, was present. Congressman Hatch of Missouri, was elected permanent chairman, and James H. Handley of Quincy, secretary.

A COMPLAINT was entered a short time ago by the boards of trade union of Owatonna, Faribault, Dundas, Northfield, and Farmington, against the Chicago, Milwaukee & St. Paul Railway Company, the charge being that the latter charged unequal and unreasonable rates between the cities of St. Paul and Minneapolis and the towns named, and that the rates on the Iowa & Minnesota division were higher than on the River division. The company denied the charge that the rates were unequal and unreasonable, and stated that the charges on the River division were affected by water competition. The Minnesota Railway Commissioners have just rendered their decision in the case to the effect, that while under the law of the state

the company is not precluded from charging higher rates on one line than on another of its road, they think the charges between the points named in the complaint are unequal and unreasonable, and should be reduced, and therefore recommend and direct that the schedule be changed to conform to one which they have prepared.

THE Cincinnati *Price Current* recommends the feeding of ground wheat to hogs, and says that some of the experiments in that line reported have been wonderful and beyond expectations. One farmer bought hogs and fed out 500 bushels of ground wheat that returned him in thirty days' feeding, \$1.63 per bushel, nothing being counted out for going to and from the mill, labor, etc. Calculations are based on what hogs are now worth, \$5 per 100 pounds.

D. N. KERN of Shimersville, Pa., has raised this season a new kind of corn which he calls "self-husking"; it grows only about five feet high and the ears are eight-rowed, ten and twelve inches long. It commenced to ripen Aug. 1, and the husk began to loosen from the ears about Aug. 29, ninety days after planting. On the 10th of September it was dead ripe and he broke off the ears; husking was not necessary. It has proved a great curiosity to those who have seen it.

AN enthusiastic writer in the New York *Times* foresees a formidable rival to the wheat growing industry of India in the fertile fields of Washington Territory. He predicts that from 200,000,000 to 300,000,000 bushels of wheat will be shipped annually from this section which will pay a profit if sold at twenty-five cents a bushel. The farmers of Illinois, Minnesota and Dakota, however, will hardly drop their implements and rush pell mell to the new El Dorado on prophecies alone.

THE Supreme Court at Ottawa, Ill., has granted Wm. C. Albertson leave to file a petition for mandamus, in which he asks that a writ of mandamus may be issued commanding the Board of Trade of Chicago, the Western Union, Gold & Stock, Baltimore & Ohio and Postal telegraph companies, and the Commercial Quotation Company to furnish market prices to the petitioner and the public generally, in as full and speedy a manner as formerly, and permit free and rapid transmission of the same by all telegraph companies.

"STRAWS show which way the wind blows," and the amount of new railroad building in the Northwest this season is indicated by the number of new grain elevators built. It is also shown by the extraordinary number of horse powers which are being placed at different points in Dakota and Minnesota. We understand that the representative in Minneapolis of the Paige Manufacturing Co., has placed nearly two hundred horse powers this season. This is considered an unusual number, and it is hardly presumable that this number will ever be reached again in a single season, as many of the elevator companies do not advocate the use of horse powers when there is very much dirt in the wheat, and it would have been much better if these had put in steam this season.

THE big wheat deal collapse of last June has been called to public notice again by the case of C. J. Kershaw & Co., which was one of the big firms that went under at the time. The matter came up in court in the form of an argument on a demurrer filed by the firm to a cross-bill filed by their creditors some time ago. When the crash came Kershaw & Co. filed a bill against Hamilton Dewar, C. B. Eggleston, Maurice Rosenfeld and others for a receiver to the limited partnership. A cross-bill to this was at once filed by Maurice Rosenfeld, Wm. R. Lynn and others, to have the special partnership declared general, and asking that the receiver be put in charge of all the property of the firm including the real estate, which alone they claim represents a money value of over \$1,000,000 and which they allege was being fraudulently conveyed away to Charles B. Eggleston;

and further praying that Eggleston be declared a general instead of a special partner. The question for the court now to decide is whether Eggleston is or is not a general partner and liable for the debts of the firm.

AN envious sheet says: "Last year Duluth 'waxed fat and kicked' with intoxication at a trade accident, flinging her heels high up in flourishes of defiance at Proctor Knott's unforgotten insinuations. But in this current year she has been again becoming small potatoes. In 1887, her grain trade has fallen from 4,700,000 bushels of wheat in 1880 to 970,000 bushels in 1887." For pure, unadulterated, unmixed lying and perversion the above takes the ribbon. Duluth's trade is growing.

WE have received a copy of the circular of Messrs. E. S. Bristol & Gale relating to their well and favorably known Taylor Horse Power. Unlike any other sweep power, the tumbling rod is overhead and the gearing out of snow in winter, and mud and dust in summer. The large number of the Taylor Horse Powers sold is sufficient testimony of the estimation in which it is held. Interested parties can obtain circulars and full particulars by addressing E. S. Bristol & Gale, Chicago, successors to the Taylor Horse Power Company.

A CONVENTION for the improvement of Western waterways has been called to meet at Memphis, Tenn., Oct. 20 and 21. The Minnesota papers are urging the people of that state to use their best efforts to procure active legislation in the matter, the possible navigation of the upper Mississippi being a matter of vital importance to them. As the river and harbor bill passed by the last Congress failed to become a law, the people must once more take the matter in their own hands and endeavor to secure some practical action.

THE "Firminich" boiler at the mill of the Plant Milling Company, St. Louis, Mo., exploded Oct. 3, destroying the boiler house and wrecking the Babcock & Wilcox boiler by its side. As soon as the debris could be cleared away and the facts investigated, a telegraphic order was sent to the Babcock & Wilcox Co. at New York, for two new boilers of 500-horse power, and in four days the same were on the cars ready for shipment. This, doubtless, is the quickest time on record where so large an order for boilers were was filled on an unexpected demand.

AT no time during the past fifteen years has the firm of Howes & Ewell, manufacturers of "Eureka" grain-cleaning machinery, at Silver Creek, N. Y., been so busy as at present, and 1887 will be their "banner year," their orders for the past ten months being, in number, very nearly equal to their entire business of last year, which was an especially prosperous one. A remarkable feature of this season's business has been their trade in elevator and warehouse separators, orders for which are a little in excess of three hundred, nearly one hundred of which were of the large class, and some thirty odd, of these, have capacity for handling from 2,000 to 2,500 bushels per hour.

A MISSOURI farmer says that he has a method of raising corn by which his crop amounts to at least one hundred bushels per acre more than any of his neighbors, and he claims to have raised this year from 125 to 142 bushels per acre. He says he will convince the farmers of Missouri that "there is but a small portion of the land planted to corn that will not carry moisture enough to take a crop of corn through any drought without serious injury," and that "the stalks will not die nor the leaves change from their dark green until the frost kills them, though the corn is ripe and fit to pick." He states that this year he gathered 73 ears from 68 stalks, counting all the stalks right along in a row, and that the 73 ears average one pound and six ounces. He offers to inform the readers of the St. Louis *Rural World*, all about his process for

producing such wonderful results, and the subscription list of that entertaining journal should immediately show the effect of such a valuable offer. Now if he will also tell us how to demolish the omnivorous chinch bug, he will have fulfilled his destiny as a benefactor to mankind.

THE old suit of John Boyd against John T. Lester & Co. of this city, has again been aired in the courts, and it was decided that the defendants must show their books. Mr. Boyd sues for relief from a note which he gave Lester & Co., in the spring of 1881 when he commissioned them to buy for his account on the New York Produce Exchange a large number of railroad stocks. He put up \$17,000 margins, and when he ordered the stocks sold, he received an account of sale which not only wiped out the \$17,000 margins but made him Lester & Co.'s debtor.

AN important case was decided recently at the Elgin, Ont., Assizes in favor of Wm. Bingham & Co., commission merchants of New York and Liverpool, against H. D. Cunningham. The action was to recover some \$5,000 lost on transactions in wheat on the New York Produce Exchange. The defense set up was that the transaction was "buying and selling on margins," and that it was not the intention of either the plaintiffs or defendant that any actual wheat should be bought or sold or was ever in existence, and they relied upon a statute of New York state which declares such a transaction to be a species of gambling and one in regard to which a contract could not be enforced.

THE following appeared in the *Daily Times* of Racine, Wis., in its article summing up the results of the Wisconsin Industrial Association, held there:

The E. H. Pease Mfg. Co. of this city made a very good exhibit here. One of the best. They received first premiums on one of each and every kind of article that they exhibited. This is a rare occurrence at an exhibition of this kind, especially when there are numerous competitors as in this case, especially in the fanning mill line. This company received first premiums on their "end shake" and "side shake" warehouse fanning mills.

This is indeed a triumph, and one that the E. H. Pease Mfg. Co. have good reason to be proud of.

MR. E. H. WALKER, for many years statistician of the New York Produce Exchange, has joined the editorial staff of Bradstreet's, the well-known commercial and financial newspaper published in New York, to which he will give his exclusive services. Mr. Walker is perhaps the best informed man in the country on the statistics of grain, flour, provisions, live stock and kindred lines. He is the author of the only complete records of this kind in the country, and the inventor of the "visible" grain supply statement. With his aid, in addition to the original work in that direction which Bradstreet's has done and has projected, that journal must become indispensable to all interested in those subjects.

THE Cincinnati (Ohio) Chamber of Commerce has received a shock to its finer sensibilities, as it were, by the application of Mr. John O'Hara for membership. They don't object to his good old Irish name, nor to the gentleman himself who, it seems, is sharp and shrewd in a business way, but to his occupation, which is that of a bootblack. Mr. O'Hara has for years been the bootblack in the Chamber of Commerce corridor leading to the hall. He has a large chair with a regular footrest set up in front, and such members of the Chamber as desire to be "shined up," can be accommodated by Jack, and sit, meanwhile, in a gorgeously upholstered chair. Outside of 'Change hours he has charge of a regularly established bootblackening stand. Mr. O'Hara is between thirty and thirty-five years of age, and is on the most intimate terms with bankers, brokers, insurance men and lawyers. He is quite a character in the city. Some fifteen years ago when a newsboy, he attempted to board a passing street car, and there being some obstruction in the way, the boy stumbled and was run over. His legs were

crushed under the wheels, and resulted in amputation above the ankles. Above his limbs he is a fine looking man of prepossessing appearance. Mr. O'Hara was proposed as a member of the Chamber of Commerce by Mr. Harry B. Moorehead, the most prominent and successful broker in the city, and he is seconded by Col. Wm. E. Hutton, and no applicant for membership could come in with better references. Nevertheless, protest has been made against him, and he has been asked to withdraw his application. He says, however, that he will stick if every vote goes against him.

A WRITER in the *Chicago Tribune* complains that the inspection of barley in this city is unfairly made, owing to a lack of practical knowledge on the part of the inspectors. They grade the barley according to a certain standard adopted by the trade, a sample of which they carry about them and compare all the grain they handle with it. The writer says this is intended only as a guide, and if competent persons were employed as judges, they would not lower the grade of a car of really excellent barley because it did not exactly conform in color to the standard. He thinks much injustice is done in this way, and that only practical men who are thoroughly posted in the essential qualities required for good malting barley, should be placed in such a responsible position.

IN an article in the *American Grange Bulletin* the writer says that wheat has slowly sunk in value from the high water mark of \$2.25 per bushel to the present price of 65 or 70 cents, and yet the farmers go on increasing the acreage and forcing the yield, hoping in that way to recuperate themselves for the losses they must sustain. At unpaying prices, the culture of wheat, which is the most exhaustive crop produced, is a bankruptcy of the soil and should be abandoned. It is estimated by practical investigation that the cost of raising wheat at the lowest figures is \$14.87 per acre. If then an acre of wheat costs \$15, if fifteen bushels, which is rather above than below the average yield, is not produced the farmer does not receive any reward for his labor.

ONE side of the case has been heard in the complaints against the railroads for refusing to furnish grain cars to individual farmers and small elevators. Now comes an outspoken protest from the big elevator men, who claim that the discrimination is all against them, and that the railroads leave them out in the cold while attending to the wants of the small warehousemen. One of the principal owners of a line of public elevators in Northern Dakota, says he has a 40,000-bushel elevator full of wheat belonging to more than fifty farmers who want to ship it to Minneapolis and Duluth. He cannot procure cars sufficient, the railroad sending but four to the station when he asked for fifteen. Of these two are given to his neighbor, who has a small 2,000-bushel warehouse. The farmers complain because they cannot put their wheat on the market and the elevator man is helpless. He protests against the action of the railroads as an outrage. So the fight goes on; and in the meantime the wheat is idle, when it should be putting money in the pockets of the producers.

A HORNET'S NEST.

The refusal of the Northern Pacific to furnish grain cars to private shippers has stirred up a hornet's nest among the farmers of Dakota, who propose to arrest every railroad agent who refuses to obey the law and who discriminates between the large elevators and individual shippers. The alliances are holding meetings and protesting against such action on the part of the roads, and a large number of complaints have been entered before the railroad commission. Mr. Odell of the Northern Pacific has issued a letter of explanation, stating that the order does not apply to farmers, and that the company stands ready to furnish cars under the law to farmers desiring to ship their own wheat, but that the road desired to protect elevator men who have paid licenses and given bonds against speculators, who take advantage of the market and sidetrack the cars for their own accommodation. This view of the case will probably prevent any serious trouble between the farmers and the railroads, which in the end could but result in damage to both parties. A test case,

however, in regard to discrimination is furnished by the arrest of Division Superintendent Graham of the Dakota Division of the Northern Pacific, on complaint of W. J. Hawk of Buffalo that the road refused to furnish him cars, and discriminated in favor of the elevator companies. Mr. Hawk bought an immense amount of grain, and stacked it up in sacks on the platform and in the waiting room at the depot. Then when the road offered him cars, he wanted to empty the sacks and ship the grain in bulk. This the railroad men refused to do, and the grain remained exposed for the most part to the rainy weather, and suffered in consequence. Mr. Hawk then caused the arrest of the division superintendent. The latter has been released on \$500 bail, and the elevator companies state that they will put in a general store at Buffalo to compete with Mr. Hawk.

THE CORN CROP OF 1887.

The Cincinnati *Price Current* has published what it claims to be as correct an estimate of the corn crop of 1887, as is possible to be obtained. The total crop is estimated at 1,510,000,000 bushels, showing a shortage of 161,000,000 bushels in seven Western surplus states, and a shortage of 203,000,000 bushels in thirteen Western states.

The following compilation shows estimates from special investigations for the states mentioned, and approximations for other portions of the country, compared with the production of 1886, according to the Department of Agriculture reports, and also the average annual production for five years, from 1881 to 1885 inclusive:

	Estimate. 1887.	Crop. 1886.	Average. 5 years.
Ohio.....	72,400,000	96,204,000	88,779,440
Indiana.....	67,600,000	118,795,000	103,894,660
Illinois.....	146,900,000	209,818,000	215,279,680
Iowa.....	218,200,000	198,847,000	202,700,320
Missouri.....	141,600,000	143,709,000	163,894,400
Kansas.....	89,500,000	126,712,000	144,104,100
Nebraska.....	102,800,000	106,129,000	98,889,220
Total.....	839,000,000	1,000,214,000	1,017,491,820
Tennessee.....	64,000,000	73,314,000	63,396,720
Kentucky.....	53,000,000	88,758,000	73,155,140
Michigan.....	17,400,000	27,635,000	26,357,980
Wisconsin.....	18,000,000	28,493,000	28,744,180
Minnesota.....	19,400,000	19,905,000	18,913,080
Dakota.....	30,200,000	15,805,000	8,572,011
Total.....	212,000,000	258,910,000	219,549,111
Above 13 States.....	1,051,000,000	1,254,124,000	1,237,040,931
12 Southern States.....	360,000,000	319,746,000	292,846,700
4 Middle States.....	84,000,000	75,979,000	75,592,286
New England States.....	9,000,000	8,733,000	7,884,000
Other States and Ter.....	6,000,000	6,859,000	5,578,568
Total.....	459,000,000	411,317,000	381,901,534

Crop, bushels.....1,510,000,000 1,665,441,000 1,618,942,485

The seven surplus states mentioned first in the above table represented 60 per cent. of the total crop in 1886, and 63 per cent. in the average annual production for five years ending with 1885; the thirteen states mentioned in detail represented 75 per cent. of the 1886 crop, and 76 per cent. of the average for the five years period.

The result is an indicated shortage of 161,000,000 bushels in the given surplus states, 203,000,000 shortage in the thirteen detailed states, with an increase of 48,000,000 bushels in other portions of the country, and a shortage of 155,000,000 bushels in the aggregate crop compared with 1886. The shortage in the seven states in this comparison is 16 per cent., for the thirteen states 16 per cent., and for the entire country 9 1/4 per cent. As compared with the annual average for the five years period the shortage in the thirteen states is 15 per cent., and for the entire country 6 1/4 per cent.

The detailed exhibits by states suggest the following variations, compared with the crop of 1886: A decrease of 24,000,000 bushels in Ohio, 51,000,000 in Indiana, 63,000,000 in Illinois, 2,000,000 in Missouri, 37,000,000 in Kansas, 3,000,000 in Nebraska, 18,000,000 in Tennessee, 36,000,000 in Kentucky, 10,000,000 in Michigan; an increase of 20,000,000 in Iowa, 14,000,000 in Dakota, and no essential variation in Wisconsin and Minnesota; an increase of 40,000,000 bushels in twelve Southern states, 8,000,000 in the Middle states, the aggregate for the portions of the country being about the same as last year.

The area of the corn crop this season has been reported by the Department of Agriculture as approximately 78,000,000 acres, and our application of the Department percentages by states gives the following results compared with 1886, arranged in the several divisions indicated:

	Estimate. 1887.	Acres. 1886.
7 surplus States.....	40,754,965	39,370,363
6 other States.....	10,696,445	10,438,897
13 Western States.....	51,451,410	49,809,260
12 Southern States.....	23,276,390	22,688,645
4 Middle States.....	2,725,520	2,718,318
New England States.....	264,310	262,737
Other States and Territories.....	269,170	265,248
Total acres.....	77,986,800	75,694,208

For the five years, from 1881 to 1885 inclusive, the annual average of the corn area harvested was 68,207,478 acres, the area in 1887 showing a gain of more than 14 per cent. over this average.

With the indicated abatement in the corn acreage from area that will not be harvested, it is likely that the final returns of the Department of Agriculture, for the 1887 crop will not show any gain in acreage compared with 1886.

→ THE EXCHANGES. ←

The dedicatory exercises of the new Omaha Board of Trade building took place Oct. 3.

Tickets of membership to the New York Produce Exchange have lately been more active at \$1,800.

The Board of Managers of the New York Produce Exchange have settled the question of a continuous daily session, it having been decided by a large majority to adopt that plan.

Mr. John Tobey, a member of the New York Produce Exchange, makes some good suggestions as to advancing the price of memberships in that organization. He says that if the Exchange members want to put up the price of memberships they must do something to bring business to the Exchange instead of adopting measures to drive it a way, and one thing that would help option trading more than all others would be to follow the example of Chicago, and trade in 1,000-bushel lots of grain, and other things in proportion, so that small traders can put up \$25 and buy or sell such small lots, while in New York a 2½-cent bushel margin on 8,000 bushels requires \$200 up.

The New York Produce Exchange men have evidently concluded to "take their doll rags and play at home," and not have anything more to do with the Chicago grain operators, beyond saying bitter things of them and expressing their unbounded indignation at Mr. Wright, the president of the Chicago Board of Trade. One New York man said recently that there were but three firms in Chicago to whom he could send an order to buy or sell at the market price with any confidence that it would be executed without his being swindled at an eighth or a half cent. Another man declared that one of Mr. Wright's friends who went up in the wheat crash several months ago owed him \$125,000, and refused to pay it. Now there!

In regard to the trouble about the "tickers," President Wright of the Chicago Board of Trade says he deprived the Commercial Quotation Company from privileges on the floor because he had been reliably informed that the company had planted its tickers in places from which the Western Union tickers had been removed at the request of the Board; also that it advertised to supply the Boston people with quotations from the New York Stock Exchange, and with fifteen-minute quotations from the Chicago Board of Trade. As this was opposed to the policy of the Board toward the bucket shops, it was decided to hold an investigation. Mr. Wright says the Commercial Company will not be restored to its former privileges until it agrees not to use the Chicago quotations in the manner contemplated, and not to do as they did on the New York Stock Exchange—that is, serve an injunction restraining the Board from interfering with their dissemination of its reports.

"Tall oaks from little acorns grow," and a very lively little fight has developed between the New York Produce Exchange and the Chicago Board of Trade, from a simple request from the former asking the latter to unite with it in having a continuous business session until 3 P. M., so as to make the trading between the two markets as uniform as possible. The Chicago Board answered by refusing to comply with the request, and intimated that the New Yorkers would do better by attending to their own affairs, and the Western people would do the same. It is asserted that President Wright even went so far as to remark to a newspaper man that the New York Board was "only a big-sized bucket shop." Thereupon the hot-blooded younger members of that body promptly cremated Mr. Wright in effigy. Then Mr. Orr, president of the New York Exchange, wrote a letter to Mr. Wright, apologizing for the insult and expressing the hope that he had not uttered the expression charged to him. Mr. Wright replied that he had nothing to say in regard to the performances on the floor of the New York Board, but that he had never designated that body as a "bucket shop," and that the alleged interview given was totally erroneous. A truce has been called, but those well posted are not sure how long peace will be maintained.

You have wondered many times, says the Chicago Mail, where all the stories originate that you hear at the club, on the cars, between the acts, and on the corner. I have just discovered how they are scattered broadcast and put on their legs. The Chicago Board of Trade is, as we all know, connected by wire with the "four corners of the world"—an expression, by the way, which comes down from our grandmothers. The men who operate on the Board are the merriest, maddest lot in all creation. In the midst of some gigantic deal, which means ruin for somebody, these fellows will stop to tell a new story and laugh on the very verge of despair. They are the same in New York, San Francisco, and some of the smaller but still rapid cities like Detroit, and Kansas City, and Omaha. As soon as a new story is told in Wall street it is flashed to Chicago and San Francisco by wire, the same being true of anything new which originates here. These stories and phrases sing over the wires between quotations to the merriment of the speculators, and as the latter are countless they go out into the city for lunch and spread the latest. The telegraph operators on the Board being up on this sort of thing know a chestnut by the sound thereof, and if a New York operator starts in on a story which is six hours old on the Board here the operator

runs in on the fellow in New York with a gong. Woe unto the operator if he doesn't, for if he deliver a chestnut from his wire the boys on the Board guy him for being a "sucker." The maddest wag on these stories, both as an originator and a circulator, is red-headed Jimmy Clifford, brother of Judge Clifford.

'Change of San Francisco says that since the collapse of the wheat deal the volume of speculative business at the daily sessions of the Call Board of that city has shown a very material reduction, and many of the brokers who heretofore were doing a lucrative business now find little difficulty in executing all their orders at the morning session. Under this condition of affairs it is suggested that the afternoon sessions be discontinued entirely.

Fires, Casualties, Etc.

C. M. Feagan's distillery at Collinsville, N. C., was recently destroyed by fire.

George Anderson's corn mill near Woodruff, S. C., was recently destroyed by fire.

M. M. Elliott, of the grain firm of Elliott & Endicott at Orangeville, Ont., has died.

The grain elevator of Hollis & Co., at Radcliffe, Iowa, was burned Sept. 16. Loss \$15,000.

The corn mill of O. P. Wilson at Sanders P. O., S. C., was lately destroyed by fire. Loss, \$2,000.

Little's elevator at Cypress River Station, Man., was burned Sept. 21. Loss \$4,000; insurance \$1,000.

The decease is announced of Samuel H. Bumm, a member of the grain firm of Bumm & Bro. at Philadelphia, Pa.

A. T. Shaffer's grain elevator at Plymouth, Ohio, was burned Sept. 13, with some six thousand bushels of grain. Loss \$8,000.

Wm. Fryatt's grain warehouse, together with 100 sacks of grain and considerable flour, was destroyed by fire several days ago.

Hamilton's elevator at Neola, Iowa, was destroyed by fire on the morning of Sept. 23. It is thought to have been the work of an incendiary.

By the falling of a derrick at the brewery of W. J. Lamp at St. Louis, Mo., on Sept. 29, two men were killed and four others seriously injured.

An old grain elevator at Wichita, Kan., was destroyed by an incendiary fire on the 8th inst. The building had been used for some time as a storage warehouse.

The grain elevator of C. Gruler at Fowler, Mich., was destroyed by fire some weeks ago. Loss \$9,000; insurance \$6,000. The origin of the fire is unknown.

Elevator "I" at Lakeside, Minn., was considerably damaged by a storm which swept over that place Oct. 3. The sheet-iron roofing was badly torn in many places.

The dock used in hoisting rock at the new Diamond Jo elevator building in East Dubuque, Ill., fell Oct. 4, striking a stone mason employed, and almost instantly killing him.

The warehouse and cattle sheds of the Iowa City Distillery Company at Iowa City, Iowa, were burned by an incendiary fire Sept. 17, entailing a loss of \$10,000. Insurance \$6,500.

The walls of the Prinz Malthouse at Peoria, Ill., were blown down Oct. 2 by the wind. The roof of the office building was also blown off. The firm had just commenced rebuilding.

One of Harrison & Griffin's elevators at Anita, Iowa, burst on the 23d ult., letting out about 8,000 bushels of oats. The spilled grain was at once loaded onto cars waiting to receive it, and shipped from the town.

John Rae, a mason of Storm Lake, Iowa, while making an elevator chimney, fell a distance of fifty-five feet, breaking his right arm in two places, but not otherwise seriously injuring him. His escape from death is almost a miracle.

Ephraim Howe's distillery at New York City was burned Oct. 6. The building, which was of brick and three stories high, was filled with valuable stock. It is a complete wreck. The loss on the building is \$25,000, and on the stock \$150,000.

The government distillery of George W. Swords, near Fayetteville, Ga., was burned to the ground Sept. 17. About 500 bushels of corn and all the machinery, except the engine, were destroyed. The fire originated in the furnaces. Loss \$2,000; no insurance.

The funeral of the late Samuel Johnston, who committed suicide Sept. 30 at Montreal, Que., took place in that city Oct. 3. Mr. Johnston was ruined financially by the bucket shops of Montreal, and his tragic death has caused intense feeling against them. A movement is on foot to abolish them.

Mr. John E. McClure died at his home in Peoria, Ill., some weeks ago of a general breaking down of the system after a long illness. Mr. McClure built the first grain elevator in Peoria, and was for many years actively identified with the grain trade of that city. He was a

native of Pennsylvania, and had been a resident of Peoria some forty years. He was very successful in business and leaves a fortune of \$100,000.

The grain elevator at Owatonna, Minn., belonging to the Winona Mill Company, burned Oct. 7. About 13,000 bushels of wheat, 1,000 of flax and some barley were totally consumed. Loss about \$10,000. The building was one of the best of its kind in the Northwest.

The North Dakota elevator at Wheatland, Dak., owned by the North Dakota Elevator Co., was burned Sept. 28. The fire was discovered in the cupola, and is thought to have been caused by friction between the belts and elevating leg. The building had a capacity of 45,000 bushels, and was full of wheat.

Corey F. Wood of the firm of Wood & Bosworth, grain dealers, Chicopee, Mass., was robbed one night recently by two highwaymen. He was gagged and bound and left behind a fence, where he was discovered by some passersby. The robbers only got \$6 in money, and strangely enough did not take his fine gold watch. Mr. Wood was pretty badly bruised, but sustained no serious injuries.

The large mill and elevator at Albany, N. Y., owned by Capron & Wolverton, were completely destroyed by fire Sept. 20. The contents were about 100,000 bushels of grain, mostly wheat, the balance being rye, corn and oats. A number of the firemen were at one time imprisoned in the fourth story of the burning elevator, and they were rescued with difficulty. The origin of the fire is unknown. The loss is estimated at \$125,000, on which there was insurance amounting to \$91,000. The mills were burned Sept. 7, 1866, the fire starting that time in the elevator, and the loss being \$80,000.

On Tuesday afternoon, Oct. 4, a disastrous fire at Bloomington, Ill., completely destroyed the mill and elevator of the Bloomington Mill Company. The fire originated in the northwest corner of the main building in the dust room, where the mill dust had evidently been ignited by heat caused by the friction of the rapidly-revolving machinery. Every effort was made to save the mill and stock, but most of it is a total loss. The machinery is all utterly ruined, save the boilers and engine, which are also badly damaged. About 20,000 bushels of wheat in the elevator were wet through and through, and undoubtedly smoked, and will be salable only as feed. In the summer of 1881 the mill was completely gutted by fire, and rebuilt on a more extensive plan and provided with machinery complete for the roller process, and an elevator added with a capacity of 32,000 bushels. The engine and boilers were of 160 horse power, and the mill had a daily capacity of 250 barrels of flour. The main building was of brick, 70x60 feet, three stories in height with a mansard roof. The elevator was 53x36 feet, and was built of solid timber. The cupola was about eighty-five feet from the ground and the building was well equipped with machinery. The property entire was valued at about \$100,000. The loss is fully covered by insurance.

THE WHEAT CROP.

The following table, calculated on the basis of percentage of acreage and condition furnished by the Department of Agriculture, shows the area devoted to wheat, and the estimated aggregate yield of 1887 in the states named, compared with the reported yield in 1886:

States.	Acreage in 1887.	Estimated Yield in 1887, bu.	Reported Yield in 1886, bu.
Ohio.....	2,634,708	34,110,000	40,362,000
Indiana.....	2,694,311	36,831,000	40,255,000
Illinois.....	1,975,092	26,110,000	27,562,000
Michigan.....	1,629,467	21,481,000	26,572,000
Wisconsin.....	1,268,208	14,793,000	14,725,000
Minnesota.....	3,129,208	40,579,000	42,856,000
Iowa.....	2,683,676	27,284,000	32,455,000
Missouri.....	1,712,603	21,716,000	21,986,000
Kansas.....	961,394	10,905,000	14,556,000
Nebraska.....	1,563,930	16,265,000	17,449,000
Dakota.....	3,917,434	52,908,000	30,704,000
Total.....	23,600,031	303,991,000	309,482,000

According to the reports of the Department of Agriculture the area in the United States sown to winter wheat last year was 24,532,386 acres, which produced 302,376,000 bushels. The acreage for 1887 is reported at 98.1 per cent. of that of 1886, which would make the area 24,066,270 acres. The condition last year was reported at 91.2 per cent. of a full crop, and represented an average yield of 13.58 bushels per acre. The condition this year is reported at 83.5 per cent., or 7.7 per cent. lighter than last year, and representing 11.34 bushels per acre.—*San Francisco 'Change.*

The Minneapolis and Pacific Railway Company will build an elevator at Minneapolis, Minn.; cost \$118,000; F. D. Underwood, general manager.

A writer in the *Pioneer Press* says that his field of green barley being threatened by chinch bugs, he ploughed a deep furrow about the field and banked it. Taking six-inch fence boards, he set them along the bank, lapping and taking them down. Twice a day he wet these boards with kerosene about two inches from the top, and the result was that when the bugs approached they at once turned and marched away.

WATERWAYS

Two engineers have been appointed by the Dominion Government of Canada to examine and report upon the utility of the work done upon the Trent Valley Canal. Several millions of dollars of the public money have been spent upon this waterway.

An exchange, speaking of the Erie Canal, says: "Knock off all excess of charges for elevator service, insurance and wharfage, then canal transportation will be so low that no railway manager can entice freights from the canals during the season of navigation."

The proposed new Russian canal will connect the Dwina and Dnieper rivers, also the river Loutchesa, flowing into the Dwina near Vitebsk, and the river Orchitcha, flowing into the Dnieper. The cost of construction is estimated at 8,000,000 roubles or \$3,600,000.

A late dispatch from Rome says that Premier Crispi and Prince Bismarck in a recent interview discussed the Suez Canal question, and agreed that as England and Italy were in accord on the subject, the three powers should act uniformly in connection with the canal.

On the Illinois & Michigan Canal for a canal boat without cargo, the tolls are three cents a mile or \$2.88 from Chicago to La Salle. The tolls are collected at Bridgeport. Loaded boats are assessed according to the character of the cargo. For a cargo of grain the tolls amount to about \$30.

A boatman recently conversing about the wonderful improvements in steam on the Erie Canal, said that ten years ago a steamer that could propel herself was thought to be a success, but at present we had steamers which could push one consort and tow two more at a hawser, and he added that no one wants a steamer that could not handle two consorts easily.

An exchange says: "Who believes that the lakes are to be abandoned? If any one does they are mistaken. The great bulk of grain of the Northwest must pass Detroit in bottoms. No railroad can compete with water carrier when we can have such harbors as are now kept up on the lakes. Year after year will be seen an increased fleet of large steamers. The child has not yet been born that will ever live to see the lakes with less commerce than at present."

The Montreal Herald in a recent issue says that a party of government engineers are at present studying the engineering features of the proposed new route of the Sault Ste. Marie Canal. They are taking soundings and making borings, which will enable them to locate the most favorable entrance. The time for receiving tenders for the work expires in January. It is understood that a large number of contractors have already visited the Sault to get the lay of the land.

A correspondent of the New York Canal Advocate is opposed to the Saturday half-holiday, as he says it causes much trouble to canal boatmen as well as the grain men. The season for business on the canal lasts but seven months during the year, and constant work is required to handle the grain as expeditiously as possible. Seven trips is all they can make from Buffalo when they go loaded both ways, and if not in by Saturday noon the cargoes are obliged to lie over until the next Wednesday evening, to allow for due notice being given to the grain men. The writer thinks the Produce Exchange should consider the matter.

A number of canal boat owners in New York have formed a "Union for the Improvement and Protection of the Canals of the State of New York," and in a late number of the Canal Advocate solicit the assistance and co-operation of all boatmen, boat builders, canal grocers, tug-boat owners and all those in any way engaged in transportation on the canals in that state. The main object of the organization will be to secure a reduction in transfer charges on canal grain in the ports of New York and Buffalo, the same to be accomplished by state legislation. The excessive elevator charges at these points are spoken of, and canal men are urged to look after their interests in the matter.

The Illinois River Improvement Committee has issued a circular which contains extracts from the reports of Major Thos. H. Handbury and Major W. H. Benyuard, United States engineers, who were appointed to investigate the cost and practicability of the project. In the report of Major Benyuard, after stating that the survey was begun at Dam 1 on the Desplaines River at Joliet and continued to a point on the Illinois River near La Salle, where the Illinois & Michigan Canal enters the pool created by the lock and dam constructed by the state at Henry, he says in substance: "The rivers have an average width of 600 feet with banks from 8 to 23 feet in height above low water. The oscillation between high and low water is about 15 feet. The fall in the low water surface between the points named, a distance of 64.2 miles, is 100.25 feet, but is not equally distributed, amounting in some cases to ten feet per mile. It is evident, after consideration, that the only feasible plan to render the stream navigable is to slack-water the entire distance. This can be accomplished by the construction of nine locks and dams. In addition to the requisite locks and dams, the plan also contemplates the construction of a short canal at the falls of Joliet and one at Marseilles. The estimated cost of improvement with

locks having chambers 350 feet long and 75 feet wide (being the same size of those of the lower river and sufficient to pass the largest Mississippi steamer) is \$3,433,562. Mr. Benyuard is emphatically in favor of using the Illinois and Desplaines rivers. The locks and dams at Henry and Joliet were ceded to the Federal Government at the last session of the General Assembly, and it is not necessary that their action be ratified by the people. The committee think the time has come when the great work of connecting the lakes and the Mississippi should be pushed to completion, and that the friends of the project should urge its necessity and practicability upon the members of Congress at the coming session.

The Toledo Blade, in its issue of Sept. 29, publishes opinions from several Ohio congressmen, and from Senators Sherman and Payne on the proposed ship canal from Lake Erie to the Ohio River. Mr. Sherman says that while he would vote for the measure if shown that the work would be of practical utility, and if recommended by the United States engineers, he doubts its expediency. Senator Payne says that he has not considered the matter, but would favor a reasonable appropriation for a preliminary survey. Ben Butterworth says substantially the same thing, and thinks if the work is practicable it would be of great advantage to Ohio and also to the whole country. The congressmen of the state generally favor a survey, and are willing to aid the project if it is undertaken.

The old Wabash and Erie Canal feeder is again a disturbing element in the local politics of Hoosierdom. On the 9th inst Hon. J. W. McBride of Fort Wayne, as special judge, ruled on the application of two members of the board of water works trustees for a temporary injunction restraining the city government from condemning for purposes of purchase six miles of this feeder, through which it was sought to bring water from the St. Joseph River to the city for the purposes of increasing the municipal water supply. The decision of Judge McBride is favorable to the trustees, and will be controlling until the case is finally decided when it comes up in its order on the court docket. The canal property is owned by Ex-Treasurer of State Wm. Fleming, John H. Bass and the estate of Oscar A. Simons, deceased, and was offered to the city for \$50,000.

THE OATS CROP.

The oats crop does not come to the front so much as wheat and corn in commercial affairs, but it is a crop of much importance in the question of supplies of feed material for animals, and this grain is also at times fairly conspicuous in speculative operations on the exchanges.

The official estimates of area in oats this season show an average increase of slightly over 4 per cent, compared with 1886. This increase is well distributed and fairly uniform as a rule in the various general divisions of the country; the states of marked increase are Kansas, 30 per cent, Dakota, 15 per cent, and Nebraska 10 per cent; in Texas the gain is 5 per cent.

The average condition of the crop when harvested has been reported as 83.4, which compares with 90.9 in 1886, 93 in 1885, 95 in 1884, and 99 in 1883.

Application of the estimates of the Department of Agriculture by states, as to acreage and condition of the oats crop, as computed by the Cincinnati Price Current, gives the approximate production in 1887 as shown in the following table, arranged to exhibit the leading states in detail, with aggregates for other divisions of the country, and comparisons for previous crops, compiled from the Department's reports:

	1887.	1886.	1885.	1884.	1883.
Ohio	32,205,000	31,850,000	37,410,000	23,410,000	29,590,000
Indiana	29,045,000	31,738,000	37,178,000	21,742,000	21,304,100
Illinois	46,920,000	108,640,000	107,098,000	88,153,000	102,750,000
Iowa	68,950,000	78,454,000	74,718,000	78,650,000	68,403,600
Missouri	35,020,000	30,577,000	28,912,000	30,574,000	30,574,200
Kansas	34,530,000	25,516,000	27,414,000	27,419,000	27,650,000
Nebraska	23,035,000	21,856,000	27,144,000	27,844,000	31,447,500
Minnesota	37,510,000	40,753,000	35,954,000	30,100,000	30,000,000
Dakota	22,000,000	20,651,000	18,220,000	11,812,000	9,000,000
Wisconsin	32,800,000	30,661,000	31,776,000	46,940,000	40,592,700
Michigan	19,713,000	18,531,000	21,781,000	19,940,000	20,001,300
Kentucky	9,123,000	10,219,000	10,223,000	7,863,000	6,890,000
Tennessee	6,750,000	7,920,000	10,762,000	7,080,000	6,997,700
Thirteen States	44,175,000	40,411,000	49,813,000	43,135,000	41,652,100
New York	38,790,000	40,222,000	38,674,000	41,145,000	42,071,400
Pennsylvania	34,793,000	37,793,000	34,321,000	35,027,000	38,193,200
Delaware	4,450,000	4,005,000	3,779,000	3,027,000	3,250,000
Virginia	4,005,000	3,779,000	3,432,000	3,027,000	3,250,000
North Carolina	53,920,000	53,920,000	53,920,000	48,077,000	47,878,300
South Carolina	21,670,000	21,670,000	21,670,000	18,965,000	17,810,100
All other	135,423,000	102,723,000	161,976,000	132,240,000	154,712,400
Total	601,000,000	624,134,000	629,408,000	558,628,000	571,233,400
Ayres	24,625,000	23,638,474	22,783,620	21,300,917	20,322,622
Yield per acre	24.43	26.38	27.63	27.40	28.11

The thirteen Western states mentioned in detail are

shown to be 15,000,000 bushels, or about 3 1/2 per cent. short of the production in 1886, and 22,000,000 bushels below 1885, but in excess of any year previous to 1885. The aggregate crop is 22,500,000 bushels short of last year, and 28,000,000 bushels below 1885. The yield per acre averages less than previously in recent years.—Cincinnati Price Current.

THE WORLD'S WHEAT HARVEST.

The following report of the results of the late Vienn wheat-crop estimates, with deductions therefrom as given in the London Millers' Gazette, is of interest.

The wheat crops of the world have, as far as can be at present ascertained, been very much larger in bulk than last year, the large increase in the European crops making up for the deficit in America and India. Perhaps the only semi-official estimates of the crops are those presented at the annual International Exhibition, Vienna, which was opened last Monday, but these estimates are necessarily of a vague character, from the fact that they are prepared too early in the season, viz., in the middle of August. Nevertheless, although in years past the actual outturn in the various countries has differed very materially from the estimates presented at Vienna, these estimates may be taken as an approximate guide of the world's production. The following figures show the estimates during the past three years presented at Vienna, and will show, as above stated, that in most of the European countries the yield is decidedly superior to last year:

Country.	1887.	1886.	1885.
Austria	117	92 1/2	104
Hungary	126	87	117
Prussia	103	95	98
Saxony	102	95	100
Bavaria—Franconia and Suabia	117	101	100
Bavaria—Upper and Lower	125	95	105
Bavaria—Pfalz and Witterau	97	88	100
Baden	100	85	97
Württemberg, winter wheat	96	90	96
Württemberg, spring wheat	82	90	96
Mecklenburg	105	98	100
Denmark	100	100	110
Norway and Sweden	100	90	105
Italy	90	98	78
Switzerland	110	100	125
Holland	102	90	95
France	105	85	95
United Kingdom	120	85	110
Russia—Podolia	100	60	90
Russia—Bessarabia	100	77	100
Russia—Poland	100	105	97
Russia—Central	118	55	75
Russia—Cherson and Ekaterinoslav, winter wheat	120	60	100
Russia—Cherson and Ekaterinoslav, spring wheat	100		
Russia—Courland	95	75	85
Russia—North	95	85	80
Russia—Estland	95	97	80
Roumania—Moldavia	90	85	115
Roumania—Little Wallachia	125	90	85
Roumania—Great Wallachia	101	84	85
Servia	140	90	110
Egypt	95	90	60
India	88	107	100
United States America	84	90	70

100 is taken to represent an average. These figures afford a very concise estimate of the world's production during the past three years. It may be added that the estimates for India and America are our own. Possibly, however, the following table, which gives the official record of the production in the various countries during the years 1886 and 1885, from which the present year's yield is estimated, will be found still more interesting:

	Crop 1887.	Crop 1886.	Crop 1885.
	*Qrs.	Qrs.	Qrs.
United States and Canada	60,000,000	63,500,000	49,000,000
France	40,000,000	36,000,000	39,000,000
Russia	27,000,000	21,500,000	27,000,000
British India	28,500,000	34,500,000	33,000,000
Austria-Hungary	21,000,000	18,000,000	20,000,000
Germany	11,000,000	10,250,000	11,500,000
United Kingdom	9,500,000	8,000,000	10,250,000
Spain	10,000,000	10,450,000	10,000,000
Italy	15,000,000	16,170,000	14,750,000
Australasia	4,000,000	2,780,000	4,630,000
Turkey	5,500,000	5,140,000	5,670,000
Persia and Syria	5,500,000	5,500,000	5,000,000
Roumania	4,000,000	2,800,000	2,500,000
Chili and Arg. Republic	4,500,000	3,600,000	3,000,000
Egypt	2,100,000	2,000,000	1,500,000
Holland	850,000	600,000	620,000
Belgium	2,500,000	2,300,000	2,400,000
Denmark	600,000	600,000	625,000
Greece	600,000	600,000	600,000
Portugal	1,000,000	1,020,000	950,000
Norway and Sweden	300,000	300,000	350,000
Switzerland	250,000	200,000	250,000
Servia	700,000	550,000	580,000
Sundries—			
Africa, Tunis, Asia Minor and Mexico	6,000,000	6,000,000	6,000,000
Totals	262,200,000	252,360,000	246,175,000

*Estimated for 1887. Quarter—eight bushels.

Thus the estimates for this year, which it will be remembered are but estimates, show the world's production to be about 8,000,000 quarters greater than last year, and about 13,000,000 quarters greater than in 1885. In this connection it is worthy of note that the average production in these countries during the five years pending 1885 was estimated at about 275,000,000 quarters.

Press Comment.

WHO IS RESPONSIBLE FOR THIS?

Early in the present month three large steamers which loaded wheat at the Union Elevator in this city were alarmingly short when their cargoes were taken out at Buffalo. They discharged at different elevators at Buffalo, and the weighmasters there felt sure that the fault was at this end of the line. Investigation proved such to be the case, and the owners of the steamships have been reimbursed for their loss. The items were quite large, the smallest shortage being over 100 bushels, and the largest over 200.—*Detroit Free Press*.

PROTECT THE CANALS.

That all grain shipped by canal must contribute to railroad elevators, or to elevators which they control, an overcharge of 2 cents a bushel, no one but the elevator owners will deny. That the grain receivers and canal insurance companies of Buffalo are in colleague to collect and divide an overcharge of \$6 on a boatload of wheat is no secret. These are fearful odds against the Erie boatmen, and an outrage on the people who are supporting free canals. The Union for the Improvement and Protection of the Canals of the State of New York will overthrow very soon these menaces to canal commerce.—*Exchange*.

WONDERFUL PRODUCTIONS OF DAKOTA.

Among the contributions to the Minneapolis State Fair from Dakota were the following from Bismarck: A Dakota banana, or species of cantelope, three feet and a half long, and a musk melon three feet long. Forty-five bushels of wild grass, twenty-five varieties, a rare collection. There is a bunch of alfalfa, three and a half feet high, sowed the 26th of May; millet, five and a half feet high. Hungarian grass, five feet four inches. Black bearded wheat, very fine, and four feet high. Samples of Scotch Fife, four feet, four feet six and four feet four inches, respectively. The beards on this wheat are long and remarkably well filled. A bushel of potatoes, Beauty of Hebron, weighing two pounds each. A squash, "Queen of the Missouri Valley," weighs 125 pounds. It is a wonderful specimen. A mammoth Hubbard squash, weighing seventy-five pounds. A large sample of tobacco, four feet high, well leaved and blossomed. A mammoth queen pumpkin, weighing only eighty-five pounds, and parsnips with leaves five feet long.—*Bismarck Tribune*.

TWO YEARS' SHRINKAGE IN THE CORN CROP.

We are entering upon another year of consumption with a corn crop much more importantly reduced, with a very inferior hay crop, and with the oat crop below an average. Root crops, which otherwise might importantly aid in eking out corn as food for stock, are in many places ruined, and generally light. The ordinary production of corn has been so bounteous that its use and the preservation of field fodder has not been required to be regulated by strict economies. It is, of course, difficult to estimate how much careful husbandry and enforced thrift may make up for crop deficiency. But, comparing the years of 1884 and 1885, in which production footed up an aggregate of 3,730,000,000, with the years of 1886 and 1887, and estimating this year's crop at 1,500,000,000, we have a shortage in the last two years of 570,000,000. This is a very great shrinkage. A mild and open winter, bad for winter wheat, would much lighten the consumptive requirement of corn. But at best we can scarcely expect to escape except in a moderate degree the effect of the great loss in production in two successive years.—*Clapp & Co.'s Letter*.

NORTHWEST STOCKS OF WHEAT.

The amount of wheat now in store in elevators and warehouses in Minnesota and Dakota, outside of Minneapolis, St. Paul and Duluth, is 10,829,000 bushels, allowing that it is 500,000 more than on Oct. 1. On that date the amount was 10,329,000 bushels, distributed along the several lines of railroads. There were on the lines of the Manitoba 4,820,000 bushels, on the Chicago & Northwestern 890,000 bushels, Omaha 275,000 bushels, Minneapolis & Pacific 88,000 bushels, along the several lines of the Milwaukee & St. Paul, 1,541,000 bushels, Northern Pacific 2,179,000 bushels, Minneapolis & St. Louis 351,000 bushels, St. Paul & Duluth 60,000 bushels, Minnesota & Northwestern 20,000 bushels, and along the Red River 105,000 bushels, making a total as stated. On Oct. 28 last year the amount in store along the same lines was 21,756,000 bushels, distributed as follows: 8,069,000 bushels on the Manitoba lines, Minneapolis & St. Louis 1,583,000 bushels, Omaha 271,000 bushels, Chicago & Northwestern 3,348,000 bushels, Chicago, Milwaukee & St. Paul 4,570,000 bushels, Northern Pacific 3,643,000 bushels, Minnesota & Northwestern 120,000 bushels, St. Paul & Duluth 75,000 bushels, Red River 87,000 bushels. The stocks in store, Oct. 1, in Minneapolis, St. Paul and Duluth were 3,190,000 bushels, against 11,297,324 bushels last year on Oct. 23. The total stocks in store in Minnesota & Dakota on Oct. 1, including stocks in both country and city were 13,519,937 bushels, against 32,953,324 bushels on Oct. 28 a year ago.

A glance at the figures show that the entire elevator system contains but 40 per cent. of the wheat held by it less than a month later one year ago. Last year's crop was so much above ordinary calculations that people had determined not to put the present too low. The official estimates intimate that the total is some 10,000,000 bushels

more than last year. That calculation is undoubtedly at fault. The final outcome of the crop of a year ago resulted in bringing out not less than 100,000,000 bushels from Minnesota and Dakota. That amount will not be reached, perhaps, by some 20,000,000 bushels from this crop.—*Minneapolis Market Record*.

NO DEFICIENCY.

There is perhaps no reason to apprehend a deficiency in the world's wheat supply for 1887-88, but there is very great probability that there will be no excess, and that all producing countries will find themselves at the beginning of the next harvest with very small reserves. Since the unprecedented yield of 1884-85 in the United States and Europe, which enabled this country to carry over a surplus of 150,000,000 bushels, there has been a steady diminution of the surplus, which is estimated not to exceed for this year 60,000,000 bushels. The harvest of 1884 in the United States yielded 513,000,000 bushels, the largest amount on record, while the crop of 1885 was but 357,000,000 bushels, and that of last year 457,000,000. It seems certain that the wheat reserves of the world were short at the beginning of the current year, and that the scarcity would have been widely felt but for the early harvests both in this country and in Europe. This year's crop in most European countries is larger than was that of last year, but the expectation is that the importing countries will have to buy about as heavily as ever, and they will have to procure a larger proportion than usual of their supply elsewhere than from the United States. As the situation now appears there can be no doubt that the price of wheat cannot remain at the low figures that have so long prevailed, which have been below the average cost of production. American farmers will have less wheat to sell, but there is very favorable promise of more satisfactory returns than they have received for several years.—*Omaha Bee*.

CANAL PROTECTION.

The Union for the Protection of the Canals goes bravely on. Energy and funds are not wanting, and the names we print elsewhere show that the boatmen and friends of the canal are determined to concentrate their forces, and make it possible for them to be heard at Albany during the coming winter. Each member of this organization will go home and vote this fall; candidates for senate or assembly who will not favor a reduction of terminal charges will be opposed in their respective districts. The boatmen for once are determined to see what efficacy there is in political medicine. They are heart sick of the present state of affairs. At New York and Buffalo they are taxed to death. Money is being liberally appropriated by the people for the canals, yet a few individuals, already rich, are reaping the greatest benefit from these canal improvements. Fruitless appeals have been made to elevator owners to reduce their charges. Each request has been treated with contempt. All improvements to the canals mean so many more shekels for the end men, who eat the kernels and throw the husks to the poor fellows who are now striving to make a little for themselves and families. It is high time that something was done to get these terminals reduced. And the only effectual way to accomplish our object is to organize, and go to the polls like good citizens. Twenty thousand votes could be secured from the whole canal interest, and the 20,000 men who cast them will not consider whether a man is a Democrat or a Republican, but will vote for a candidate who will promise to do his best to protect as well as improve the canals of the state.—*Canal Advocate*.

BOARD OF TRADE ARBITRATIONS.

Of the many important services which the Board of Trade as now constituted can render to the business community, not the least is that of settling disputes between merchants by arbitration. The law does not, as in France, compel merchants to submit their differences to arbitrators selected by the Board, but, practically, the Board has large compulsory powers in such cases. The refusal of either of the disputants to submit his case to the judgment of what is really a jury of experts, would seriously prejudice his case when it went before any other tribunal. And the power of expulsion for conduct grossly dishonest or dishonorable in any mercantile transaction, no merchant who values his standing and reputation would care to brave. We believe that it would be best to settle all disputes and differences between nations and individuals by arbitration. Wars and litigation may thus be avoided. The machinery for arbitration through the Board of Trade is simple, inexpensive and easily put into operation. The arbitrators are men of experience and high character, much better qualified to decide justly and promptly than can be expected of the ordinary tribunals with their slow and cumbrous proceedings, and their juries selected almost at haphazard. Counsel may be employed before the Court of Arbitration should either of the disputants so desire, and the decision is binding in law. By resorting to this tribunal, time and money are saved, the ill-feeling which a protracted and expensive lawsuit almost invariably engenders is avoided, and substantial justice is assured. It is gratifying to learn that amongst our business men in Toronto, this mode of settling business disputes is growing in favor. A short time ago we reported the facts of some cases settled by arbitrators appointed by the Board, as they appeared in evidence, and the decisions, which, we believe, met with universal approbation. Tonight three or four other cases will be submitted to arbitration. It seems probable that henceforward all, or nearly all, questions and disputes that arise in the mercantile community will be disposed of in this sensible and simple manner. Our business men will thus avoid much

trouble, and will increase the reputation they now bear for upright, straightforward and honorable dealing in all their transactions.—*Toronto Globe*.

THE STORAGE QUESTION.

The storage question is a leading topic on the Board. The elevator men have many upholders among the bear party. The bulls, a majority of whom are unable to thoroughly analyze the causes for the depression in the grain trade, are inclined to call the elevator men robbers and all kinds of harsh names. A group of operators were discussing the elevator problem yesterday, when one said: "The bulls want all the protection, and never think that the bears must have some. I am a short seller, and should storage rates be reduced there would be nothing in it for me." An elevator man present said: "Those who howl about reducing rates of storage don't know what they are talking about. A few years ago I received two cents for storing grain ten days. Now we get $\frac{1}{4}$ cent. Last spring, when all the houses were filled with wheat, I was frequently appealed to to build more elevators, put up annexes, and do anything to take care of the grain that was pouring in at any prices we wanted to charge. Now we have 400,000 bushels of wheat in our houses, where there was 5,000,000 bushels in the spring. There is another point the advocates of cheap storage lose sight of," continued the speaker. "That is that Chicago elevator men take better care of the grain than anywhere else. When it gets out of condition they sell on 'post' it, and charge nothing for turning it over, like they do in New York, where wheat has been 'posted' in February. Should rates be reduced the bulls would be no better off than they are now." A third operator then took his turn and said: "I tell you what it is, the short seller is a help to the market instead of a detriment. Were it not for the short seller the bulls could not get wheat up. It is the short sellers that have made all the bulges the past two years. When they want to cover they do not stop to figure on the average, or anything else, but keep buying until they have filled up. Were it not for the short seller, wheat would now be selling at 65 cents, or below."—*Chicago Evening Journal*.

CO-OPERATIVE SHIPPING.

It has always been insisted in these columns that the interests of the farmers were quite as much in need of co-operation and organization as those of other lines of business. They are generally so engrossed in their home work, that they are reluctant to give sufficient attention to the operation of those who live and flourish in handling their products, to insure the return of full recompense for their labors. Pretty generally they wait to be driven to co-operation by the greed and imposition of those with whom they deal. They see the great elevator companies realizing robust dividends and able to build vast structures from the profits—while the farmers do not get any visible margins of profit. Dissatisfaction with prices, exorbitant commissions, docking for dirt, and other manipulations, have induced farmers to erect elevators of their own in various localities, or co-operate in the shipment of their grain. It is not probable that in every instance the farmers are able to secure managers of sufficient ability and experience to make the experiment a success. But from the report of the secretary of the organization at DeSmet, with which perhaps some readers are familiar, very remarkable success seems to have been secured in that instance. He says:

The result of our operations from Sept. 25, 1876, to July 1, 1877, or nine months and five days is, that \$25 has earned dividends to the amount of \$3.75 plus \$12.50, plus \$20.45, being a total of \$36.70, or at the rate of 146 4-5 per cent. for this period, being over 12 1-5 per month interest for the entire twelve months upon our money as the clear gain made by greenhorns in the wheat selling business. And this assumes we shall have nothing more till Sept. 25. This is the result of trotting along behind the elevator men and doing as they do in buying, grading and deducting for dirt. We certainly always give honest weights. Our buyer is paid by the month, is conscientious and gives satisfaction to the seller as well as to the association. In addition to the above profits we have paid each stockholder two cents per bushel above the market price on all the wheat sold us, raised by himself.—*Northwestern Farmer*.

A recent dispatch from Winnipeg, Man., says: "There is already a grain blockade on the Canadian Pacific Railway at Carberry. Only 10,000 bushels have been marketed out of a yield of 600,000 bushels in that district, and the C. P. R. are unable to transport it. They only supplied one car in the last three days for the four elevators, which are now blocked. There was a demand yesterday throughout the Province for 300 cars, and it could not be met. The government is in constant communication by cable with parties in England in regard to the matter."

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J. H. Vail.
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You are hereby notified that your proposals are
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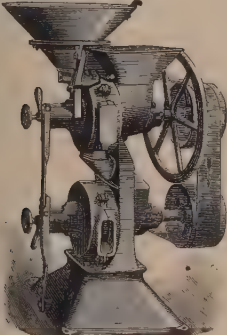
The horse-power required in these three stations
will aggregate 8,700 horse power.

I inclose you herewith contracts in triplicate,
covering the boilers now required for station in
26th Street.

Please execute contract and return two copies
to me.

[Signed.] Yours truly,
J. H. VAIL,
Chief Engineer.

[Inclosures.]

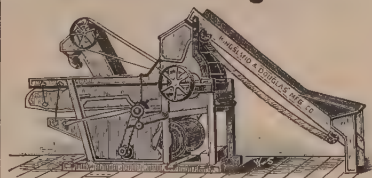


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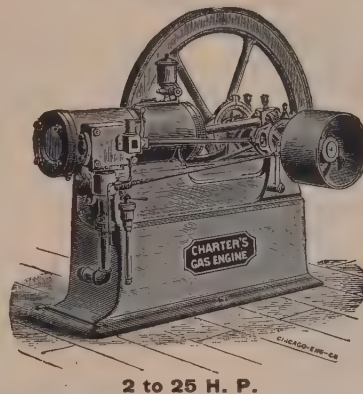
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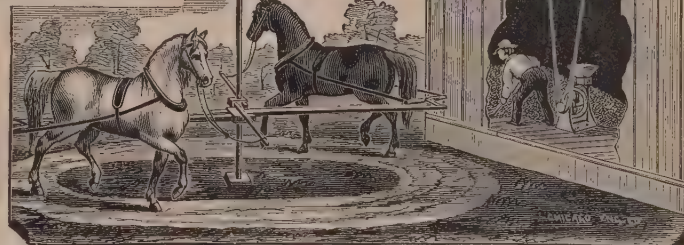
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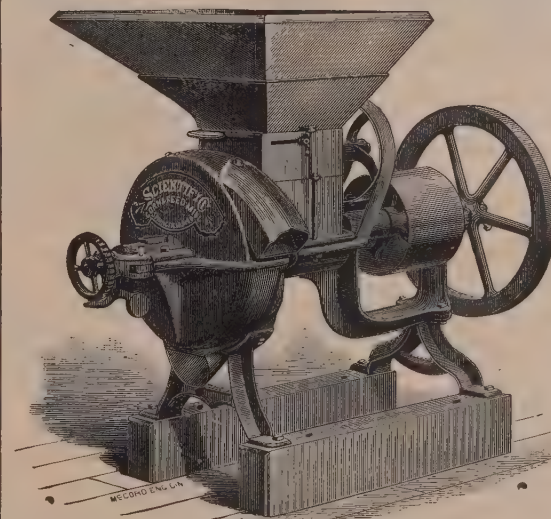
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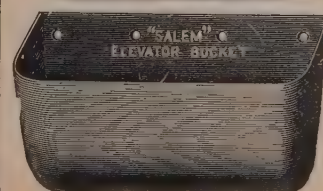
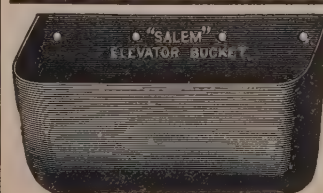
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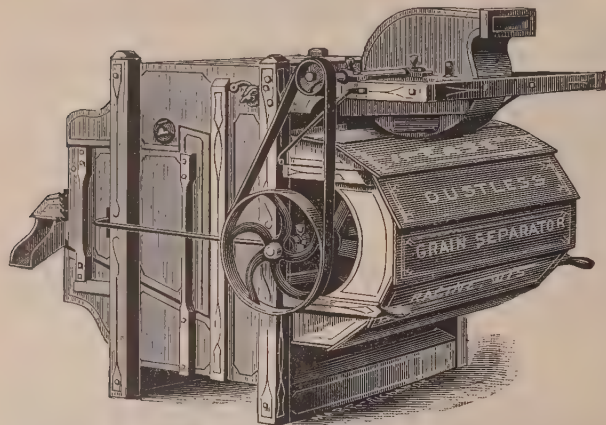
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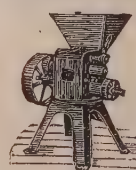
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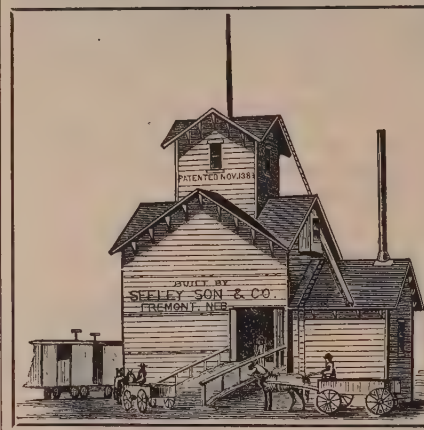
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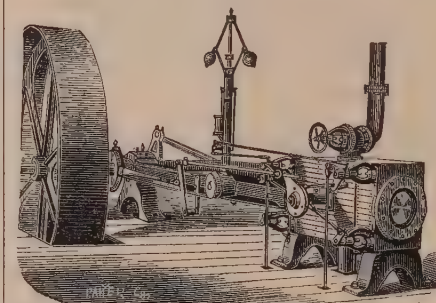
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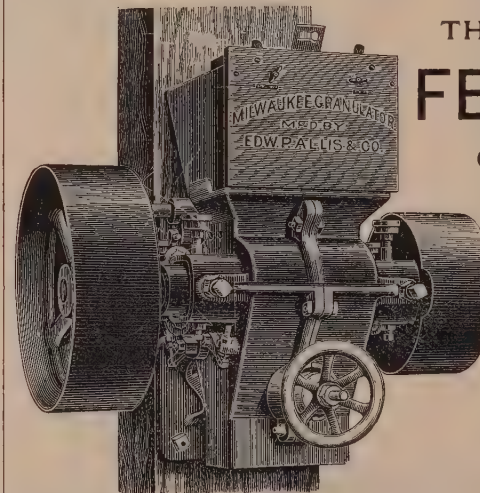
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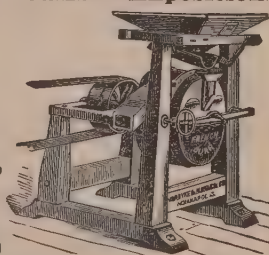
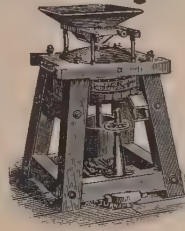
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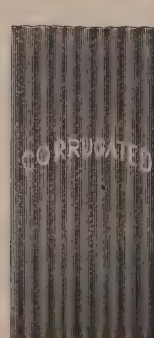
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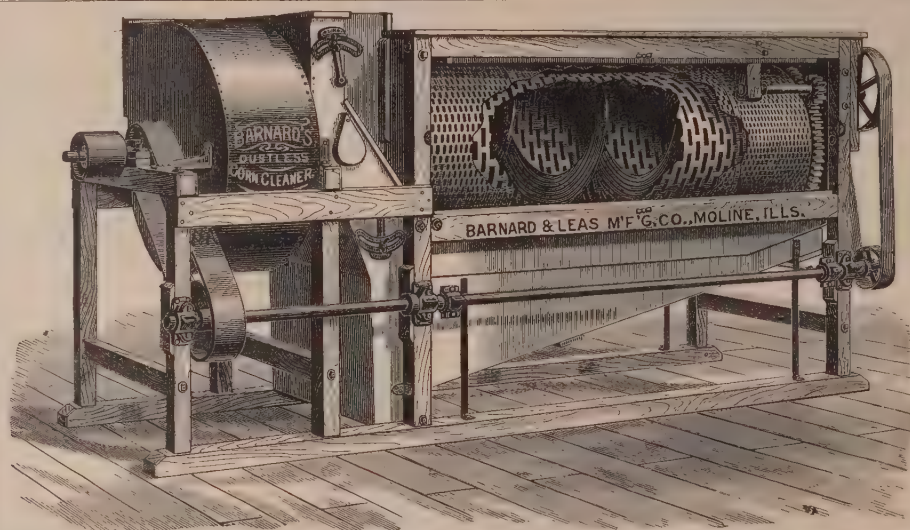
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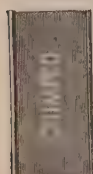
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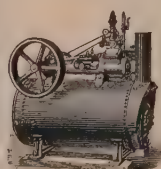


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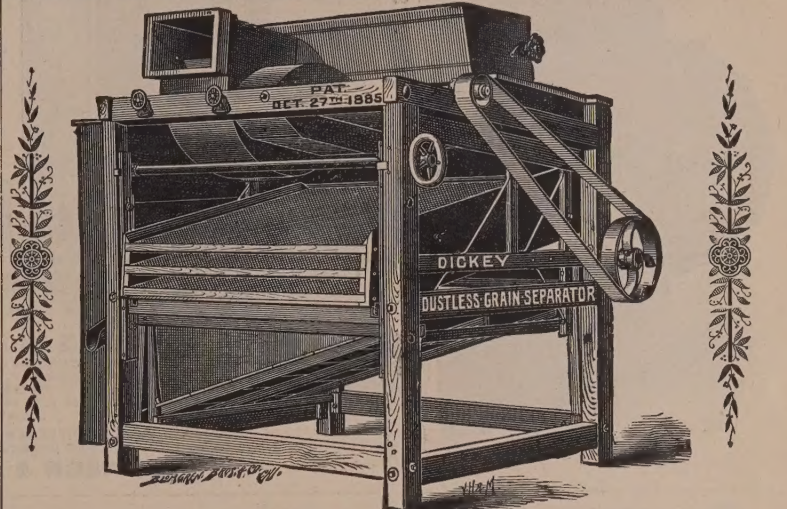
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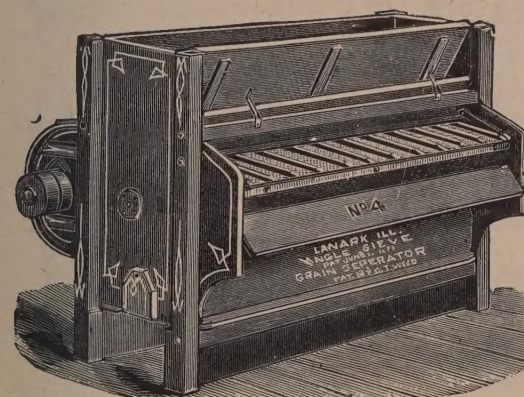
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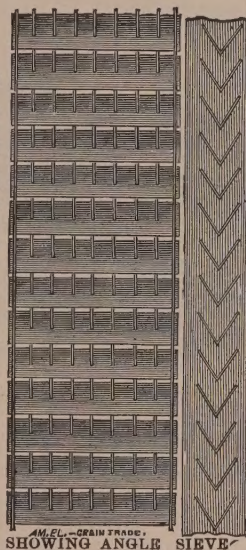
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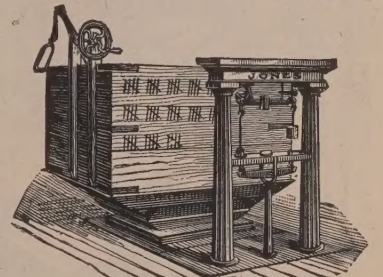
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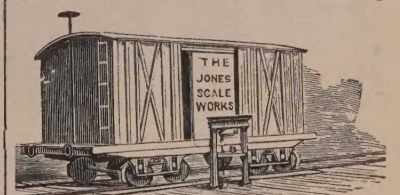
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Jones, He Pays the Freight



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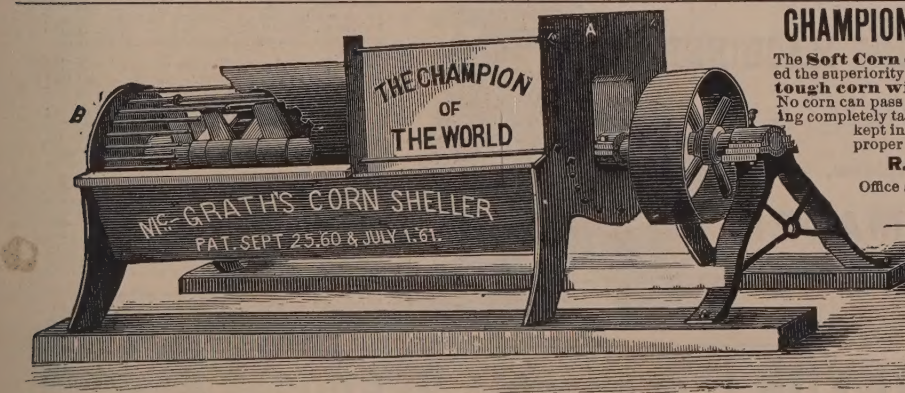
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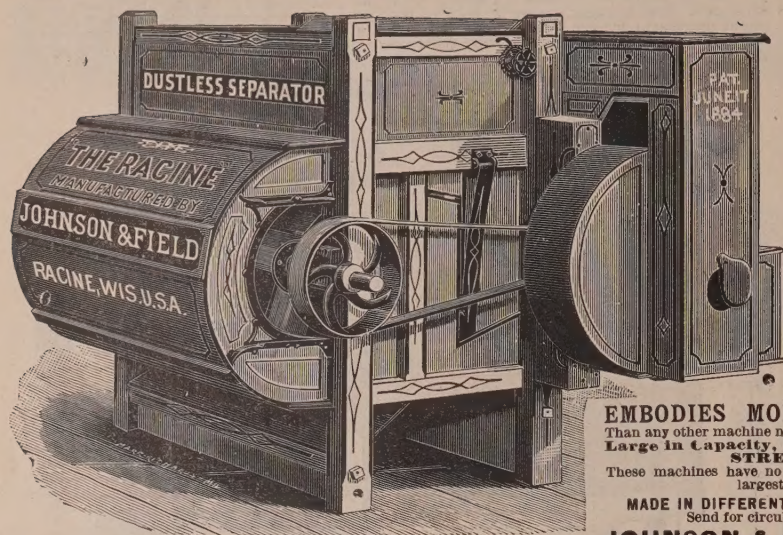


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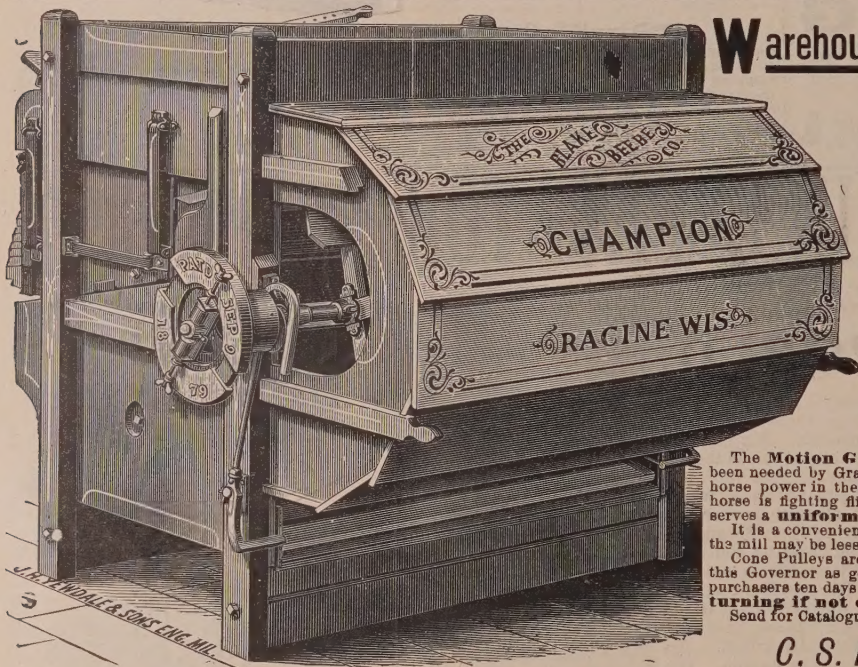
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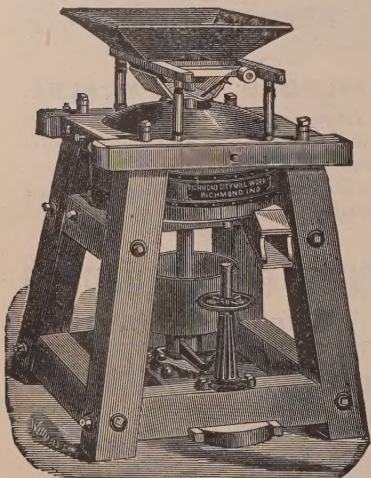
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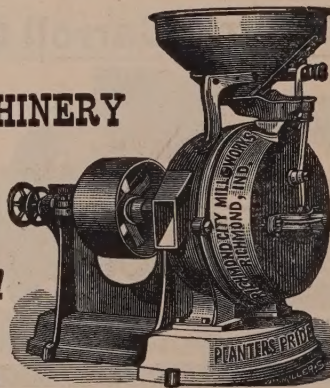
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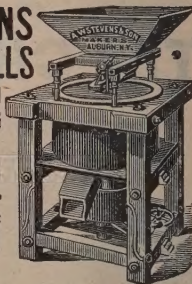
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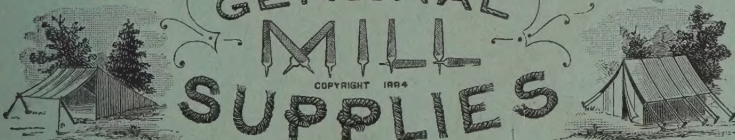
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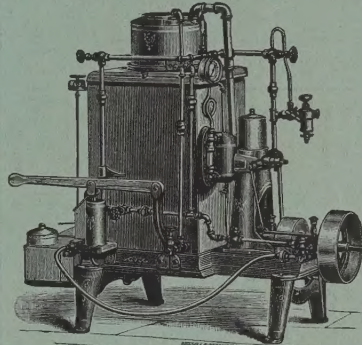
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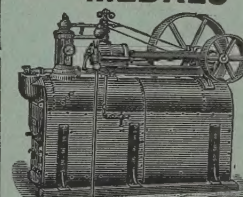
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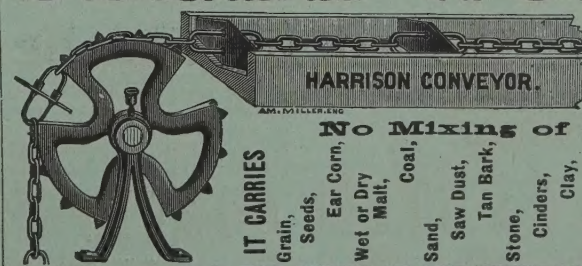
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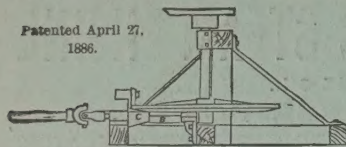
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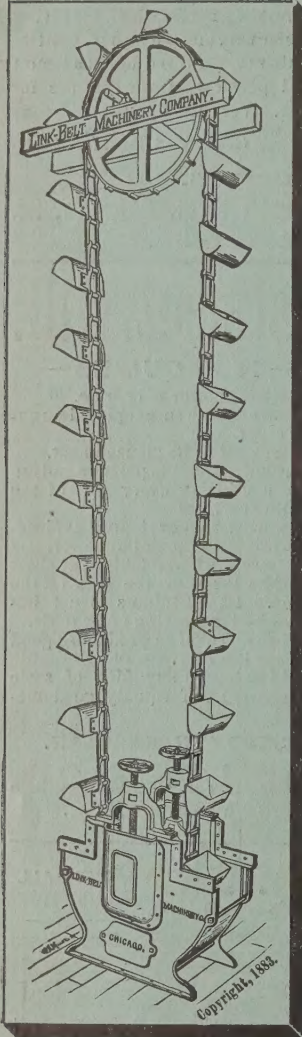
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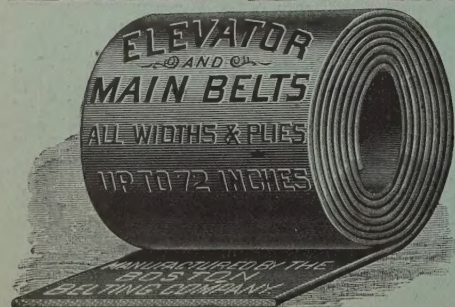
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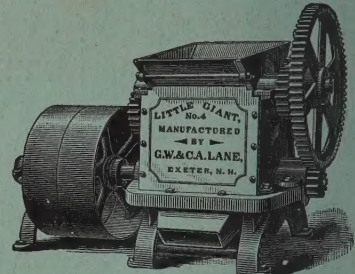
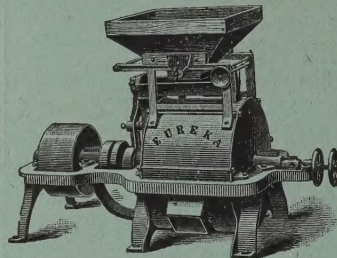
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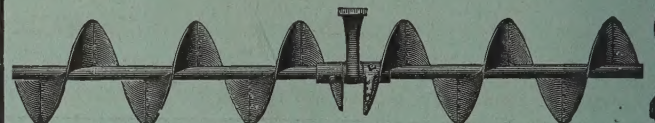
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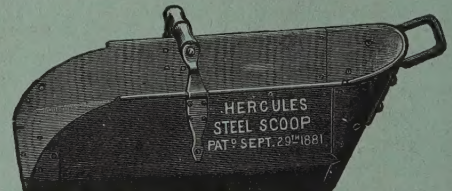
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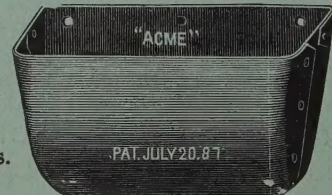
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